

this middle West, and finally extended even further west. They traded in the Lake Michigan region and came down all over this country.

3129 The fact that a man made a statement as a result of a conversation with his contemporaries who knew the facts should be taken into consideration with all these other things which I might name.

As to whether the statement of a man of standing who has talked with a great many men with reference to a fact makes the statement on the basis of his talk with those men is given as much weight or even greater weight by students of history than the isolated experience of a single individual—do not think I can answer the question. I would take the statement of the contemporary and hold it suggestive and try and square his statement with known facts, and if I found no other corroborative evidence that would be a statement in a line of evidence that would be given weight by historians.

3130 Q. Wouldn't the statement of a truthful man who had talked with fifty men who had come down from Lake Michigan through the Chicago river, across the portage and down the Desplaines and Illinois to St. Louis, be worth more from the standpoint of the historical critic than the statement of one man who had gone over the route?

Objection, hypothetical question based on no evidence appearing in the record or in the editorial.

A. Would have to take into consideration the conditions under which the statement was made. If we assume that he told the truth and could prove it was the truth, I would give it weight.

3131 Q. Assuming that the man reported correctly his conversation with the men with whom he had talked, isn't that statement worth more than the statement of one that had gone over the route?

Objection, no foundation in the record for the question.

A. I don't know how I would find out whether he was reporting accurately what men had told him; would have to test that in a good many ways as a historian.

3132 With respect to the investigation I made for the purpose of determining whether the man who wrote this editorial had the means of talking with traders who had come down over this route, I said I took that into consideration when I considered that he lived at St. Louis for a number of years, and was making a statement concerning which he would

know something. I have tried to verify it and test it, which I think any historian would do.

To test the editorial it would be necessary to find out whether those boats had been seen at St. Louis at any time, but if I would find a number of boats in St. Louis I 3133 would have to know still further how they got there; there were three or four possible routes; I went to a more specific point to find out what trade went down the route particularly in question, and that of which he spoke and which I was testing. I made the statement in drawing my conclusion, that so far as the evidence I had found went, it did not square with the facts. Now, if evidence can be brought up that this was used, and that he was stating correctly, why my conclusion is wrong.

3134 Whereupon counsel for complainant directed the attention of the witness to Semple, page 272 (reading):

"The same difficulty was present in the waterway of Green Bay, Fox River, and the Wisconsin. The canal connecting the great bend of the Wisconsin with the Upper Fox was only two and one-third miles long, but the sandbars of the Wisconsin, the shallow, tortuous course of the Upper Fox, and the numerous rapids necessitating canals on the lower river, robbed this waterway of much of its value."

I know that the Green Bay, Fox River and the Wisconsin route was a trade route, in spite of all the difficulties which were pointed out; she speaks there of the difficulties of that route as compared with railroad competition, which appears in the rest of the sentence not read by counsel, which is as follows: "And made it succumb rapidly to railroad competition."

3135 There were rapids and sandbars in all the rivers used in these early periods.

Q. So that the mere fact that the river was dry during certain times of the year, and there were shallow places and rapids, does not take away from these streams the fact that they were part of a trade route, as you find it out from your study of history?

Objection, involves elements which do not appear in the citation the question refers to, as the river being dry, and so forth.

A. I understand that they were trade routes in spite of these difficulties.

My first proposition in this case is that the early settlers

followed the river. I did not reach any conclusion based wholly on the point that this Desplaines river could not be used because the early settlers did not use it.

3136 The authorities I cited on the early settlers coming in along the rivers were on the point that where the rivers are navigable they are highways of travel, and that along the rivers settlers came in and settlement was made. They settled close to the river for a number of reasons, among them purposes of navigation. In my study of the settlement of this area, I found no evidence that the Desplaines river was used by the settlers for purposes of navigation.

3137 They began settling all over this northern section in 1833 when the Government began its work upon the harbor here.

Q. And you draw from that the conclusion then that this river could not be used because during this period, 1820 to 1830, settlers did not come in along the river?

Objection, not a fair statement of what the witness said.

A. Not wholly; didn't draw any conclusion upon that in my statement, and before 1830 they had not settled up this far. They came up the river and had not come in by the northern route at all to speak of.

3138 I cited these excerpts from pages 251-257 of Semple to point out that the history of the settlement and of the development of the country was along the rivers first.

In its bearing on the use of the Desplaines river, I think it points out that if the river had been navigable during the period of settlement, settlers would have been found along the river. If they were found along the river it would be a case of where the people would be following the natural law. One of the reasons why they would settle there would be because it was navigable; there would be other reasons.

3139 It would be a line of evidence pointing out that they were following the natural law of development, expansion and settlement.

The map on page 314, Volume 1, Bulletin of the University of Wisconsin History Series, purports to show the density of population in Illinois in 1830. St. Louis was near Belleville.

My attention was directed to the fact that a portion of this map along and in the neighborhood of Lewiston shows six or more persons to the square mile along the Mississippi. With reference to what this map shows about the failure of settlers

to go along the Mississippi, it does not indicate that they did fail to settle some along the Mississippi.

3140 The map is based on the census report; takes the county report and does not show accurately the shade conditions as to where the population would be. I presume from this map that according to the census of that time that settlement was not along the Mississippi to the extent of six or more per square mile. In 1830, when his map was made, counties were, of course, large in northern Illinois and in that part of the military district.

3141 The presence of the Indians prevented the settlements at that time from going further up the Mississippi, and would be one reason for retarding settlement in all that territory. During the period before 1830 they had begun to relinquish the Indian title and then the Mohawk War of 1832 which did drive them farther, made possible settlement to the north. Clearly the presence of Indians would be one of the things which would have to be taken into consideration.

I don't think it is a fact that all this material I have put in about settlers following the river has nothing to do with this problem. I didn't think so when I submitted it.

3142 They might settle along a river even though it were not navigable, as in Peoria county, to get millsites, for saw and grist mills. That would be another reason why they would follow the rivers.

Q. Are you willing to state as your opinion as a historian that the reason, or one reason why the territory along the Desplaines river was not settled during the time to which you have referred in your testimony—

A. Well, namely?

Q. —was because the river could not be used for purposes of navigation, or that that had the slightest bearing whatsoever upon the question of the settlement of the country?

A. There would be a number of things to take into consideration to explain the fact that the territory was not settled. One of them would be the presence of Indians in the early periods. Another would be—

Q. I insist upon an answer to my question yes or no.

A. I will answer the question.

Mr. SCOTT. He don't have to answer it yes or no.

3143 Mr. CORNEAU. Yes, if he asks if he is willing to state that as his opinion.

Mr. SCOTT. He can answer that question.

A. Will you read the question to me again?

(Question read.)

A. Yes, I think that has a bearing. It is one of the things that would have to be taken into consideration. If it were navigable they would settle. They did settle up on the Illinois river as far as it was navigable. They went up to Peoria and settled there and then went still farther up the Illinois river and settled. Now, if the Desplaines had been navigable they probably would have gone still farther. Now, I have answered if yes or no, have I not? Shall I go ahead and give some other reasons why I think that territory was not settled?

Mr. WILKERSON. I am asking you whether in line with what I have called to your attention with reference to those other factors entering into the question of early settlement, you still adhere as a historian to the proposition that the question of the navigability or non-navigability of the Desplaines river had anything to do with the early settlement along the river?

Mr. SCOTT. That question he has answered.

3144 A. I answered it unless you desire me to go ahead and give reasons why it was settled.

Mr. WILKERSON. Q. Then I understand you to say that you do adhere to that position; am I right in that?

A. Adhere to what position?

Q. The position that this did have something to do—

Mr. SCOTT. I submit the witness has given his answer. He has stated in the first place—well, he answered it categorically; therefore there is no occasion for any further question.

Mr. WILKERSON. I do not understand that he answered it categorically or tried to answer it.

Mr. SCOTT. He asked you if he had answered it yes or no, categorically, and you replied in the affirmative. Just read his answer there.

(Record read.)

Mr. WILKERSON. Now, let me have my question.

(Question read.)

Mr. WILKERSON. Read the question omitting what is after the word "or."

Mr. SCOTT. The witness has already answered the question with all that in.

Mr. WILKERSON. Yes, but I want him to answer it without it.

(Question read as follows: "Are you willing to state
3145 as your opinion as a historian that the reason or one reason why the territory along the Desplaines river was not settled during the time to which you have referred

in your testimony, was because the river could not be used for purposes of navigation?")

A. That would be one reason.

When the port at Chicago was improved and it was connected with the east, then population came in by the northern route rather than the southern; and with Chicago as the stimulus they began settling out in this territory 3146 which includes the Desplaines area. In the absence of a good harbor and transportation facilities between Chicago and the East would be an explanation for the paucity of settlement in this region.

Q. You referred in your direct testimony, Mr. Lee, to Hulbert's Historic Highways, Portage Paths, Volume 7; in connection with what you read from that volume, I call your attention to pages 180 and 181, and ask you to read the paragraph commencing at the bottom of page 180.

Objection to the question and to the request to read into the record, as the excerpt requested is not germane to that portion of the book which the witness introduced and read into evidence. Counsel for complainant in each instance where defendant's counsel asked the witness on the stand for the Government to read in other parts of the book having objected that it could not be put in evidence in connection with their case.

3148 Whereupon, after some discussion, it was stipulated that where a passage had been copied into the record it need not be recopied, and may be treated as being in the record, and offered later.

The WITNESS (reading from Hulbert, page 180):

"The Kankakee-St. Joseph route was a favorite one for travelers returning from Illinois to the Great Lakes and Canada. The favorite early 'outward' route was from the western shore of Lake Michigan into the Illinois river. Here were two courses: by way of either the Calumet or the Chicago river to the Desplaines branch of the Illinois. The latter portage was best known and most used. Perhaps no one of the western portages varied more than this in length, as on the best authority it is asserted that sometimes no portage was necessary, and at others a portage of nine miles was necessary: 'The Chicago-Desplaines route involved "a carry" of from four to nine miles, according to the season of the year; in a rainy, spring season, it might not be over a mile; and during a freshet, a canoe might be paddled over

then entire route, without any portage.' When Marquette reached the Desplaines, known as 'Portage river' because it offered a pathway to the Illinois, he was compelled to make a portage of only 'half a league.' The course of this portage is practically the present route of the famous Drainage canal which joins the Chicago river with the Desplaines at Elgin, Illinois."

I would say as to this author's characterization of the authority as the best authority in the sentence "on the best authority it is asserted that sometimes no portage was necessary," that I characterized the book the other day as being a popular history, I believe, did I not? It may have been that he went into that in detail or it may be he did not I would want to test that statement as I would want to test a good many of Hulbert's statements.

3151 My thesis on Transportation as a Factor in the Development of Illinois was submitted to Professor McLaughlin about two years ago. The only change I have made since then has been in the matter of English.

3152 I never had in that thesis any discussion of the Illinois and Michigan canal. The only time I considered this fact was in connection with the development, as I have pointed out in chapter 4 or 5, when it comes in the period after 1850. I used the factors that developed those territories, those two divisions, the prairie of northern Illinois and the military tract; and the prairie of eastern Illinois. The factors that developed that area were the railroad and then the development of the Illinois and Michigan canal. In that connection is the only place I discussed the Illinois and Michigan canal.

My attention is directed to Schoolcraft's Journal of Travels from Detroit * * * to the Sources of the Mississippi River, in the Year 1820. I read from page 384 an entry purporting to have been made August 30th. I am not sure whether I read what immediately precedes it under date of August 29th.

3154 (Upon request of counsel for complainant, witness read as follows from the entry under date of August 29th.) (Reading):

"Chicago Creek is eighty yards wide, at the garrison, and has a bar at its mouth, which prevents shipping from entering, but is deep within. It is ascended eleven miles in boats and barges, where there is a portage of

seven miles across a prairie, to the River Plein, the main northwestern fork of the Illinois.

The intervening country consists of different strata of marl and clay, presenting great facilities for canal excavation, and the difference in the level of the two streams is so little, that loaded boats, of a small class, may pass over the lowest parts of the prairie, during the spring, and autumnal freshets. But at mid-summer, it is necessary to transport them overland, to mount Juliet, a distance of thirty miles. From thence the navigation is good, at all seasons, to St. Louis, a distance of four hundred miles."

3155 Schoolcraft's statement here is that at mid-summer it is necessary to transport the goods overland to Mount Juliet, a distance of over 30 miles. This would have to be taken into consideration with other statements he made; examining that itself, it would show that at mid-summer overland transportation was necessary to Mount Joliet. And that during the spring and autumnal freshets no portage at all was necessary.

3156 I could not put the author's meaning in other words than as he expresses it in this paragraph.

3157 He said that in high water no portage was necessary at all.

3158 In connection with my criticism of Schoolcraft, I have taken into consideration, in testing Schoolcraft, the passage which was read into the record on the part of the Government from "A Narrative of an Expedition Through the Upper Mississippi River to Itasca Lake, etc., in 1832 under the direction of Henry R. Schoolcraft." Transcript page 331 (Abst., 154).

3159 When he passed over this route himself in 1821, Schoolcraft gave somewhat in detail his experience, and the conditions he found there; later in 1832, when he refers to this passage in a general way, he speaks of it as a route from Chicago to the Illinois, and that it is well known. He says "the principal points at which the waters of the Mississippi communicate by interlocking rivers and portages with the lakes, are the following, proceeding from south to north, namely," and then he gives by the Illinois and Chicago creek and names along with that some others, and he says that they are well known.

3160 I think the question which would immediately come up to a historian—it did with me—would be as to whether

we should give greater weight to this reference to a general route which he makes in 1832, or whether we should give the greater weight to the statements which he made in his own actual experience when he passed up in 1821.

3161 I have before me a Schoolcraft's Travels in the Central Portion of the Mississippi Valley, in which he gives an experience going up the river, page 318. I find from the present examination, that Schoolcraft was going up the river in August, 1821.

3162 He left the Illinois at about the mouth of the Vermillion. Answering from memory, the water was low at the time he made that trip. I don't know whether he uses the word "very" or not. I took into consideration the location of the mouth of the Vermillion. He says:

"We reached the mouth of the Vermillion, a fine clear stream entering on the right bank. This point is estimated to be equi-distant between Chicago and Fort Clark, it being ninety miles either way."

Don't know the exact distance of the mouth of the Vermillion from the junction of the Kankakee and Desplaines. If this be correct it would be something like 45 or 50 miles.

In reaching my conclusion as to whether Schoolcraft's general statement was to be overcome by this particular narrative, I took that into consideration along with the other things and noted that he made a long portage, but that he made it at low water and met traders.

3164 As to taking pains to ascertain what the ordinary depth of the water in the Illinois river was at the mouth of the Vermillion at these rapids, I did take into consideration what his actual experience was. I judge that it is clear if the statement is to be found, and I rather think it is, that if there was only 8 or 10 inches of water in the river at that place, and sometimes less than 4, there was practically no water even in the Illinois at that time. The passage, "The water was scarcely eight or ten inches in any place, and often less than four," would indicate that there was very shallow water.

I remember a statement that the Ohio river at that time was entirely dry, but I do not remember what it was read from, or just what year that was.

3165 In determining the weight which is to be given to this isolated experience, I took into consideration that sometimes there was practically no water in the Illinois river, even away below the junction of the Kankakee and Desplaines.

Q. And have you taken into consideration the fact that sometimes even in the Ohio and Mississippi there is not enough water to carry boats?

Objection, no foundation in the evidence for that question.

A. I made an investigation on some rivers through this part of the country, as to whether there was ever a time when the water was so low that the rivers could not be navigated.

I think I took that in consideration.

3166 In the Chicago Daily Democrat of October 8, 1849, I find a statement here which says that the Ohio river was too low for transportation. It reads: "These goods could not have reached here in season by any other way, the Ohio being too low for transportation by that route." The general editorial heading is: "The Illinois and Michigan Canal," and that part of it is taken from the Beardstown Gazette.

(Upon request by counsel for complainant, the witness then read an editorial in the same paper, entitled "The Ohio river dried up.") (Reading):

"John Randolph once described the Ohio River, a stream 'frozen over one-half the year, and dried up the balance.' The Cleveland Plaindealer says it is now so low, and has been for some weeks, that boats drawing over 16 inches of water could not run. Of course, all business has been suspended, and a friend, just from Pittsburgh, says the docks there look desolate. No freighting done, and passengers to Cincinnati, are going to Cleveland by hundreds to go via Sandusky.

3167 The great Northern route by the Upper Lakes, is the only feasible, safe and constant means of communication with the South and Southwest. All the goods destined for the Southern and Southwestern markets are coming this way, and shippers and consignees are well satisfied with the way their goods are forwarded. We can do all the business of forwarding on this route much cheaper than it can be done by the Ohio river route, and goods are less liable to damage by exposure," &c.

Q. As a critic of historical narratives, in your opinion, would the statement in the editorial which you have just read, that the Ohio river was dried up at that time, that particular time, overcome a general statement by the same

writer that generally speaking the Ohio river could be used by boats?

3168 Objection, the editorial does not state that the Ohio was dried up at that particular time, whether the question refers to 1821 or 1849. It speaks of it as not being navigable for boats drawing 16 inches of water and quotes a generalization of Randolph referring to no particular time.

Q. Did the statement that it could not be used by large boats at that time overcome the statement by the same writer that generally speaking it was being used by boats?

Objection, the same.

A. One could not draw a conclusion from a specific statement. No historian would do that from a single statement. He would simply take it as suggestive and check it up and see if he could corroborate it.

The gist of the extract I read from Schoolcraft, being the one which begins "At the mouth of the Vermillion river there was scarcely eight or ten inches of water in any place and often less than four," and continuing on the same page, "With great exertions we had proceeded two or three miles above the Vermillion, and
3169 about four o'clock we encamped near a remarkable isolated hill called by the French voyagers Le Rocher and Rock Fort,"—is that finding the navigation difficult they relinquished the design of going further by water; got horses and continued their journey. I judge that the figure 14 on page 332 means the 14th day of the month. I do not know what ford he referred to when he says, "At ten o'clock in the morning we reached the ford of the Desplaines."

3170 All I see now that would throw light upon that was that he says he met several traders who had transported their goods in boats and carts from Chicago creek, and "who informed us that they thought it practicable to enter the Illinois at Mount Joliet," which would rather indicate, as I read it at this time, that this ford referred to was this side of Joliet. It says that they found the river at this ford about 30 yards wide and a depth of water of about two feet. He finds more water there than was in the Illinois at the mouth of the Vermillion, which was at that point, if I remember correctly, eight or ten inches.

I find this statement on page 333, where he says:

"The computed distance from the ford on the Des-

plaines to its union with the Kankakee is about 45 miles; 15 miles of this distance consists of Lake Joliet and the remainder is almost equally divided between ripples and still waters."

On page 332 he says:

"Between this place and the Vermillion where we left the Illinois we have seen the river but seldom although our route has been for the greater part upon its banks. We have, however, seen its channel at a sufficient number of points to determine that it has several long and formidable rapids which completely intercept the navigation at this sultry season."

The significance that I attach to the use of words "at this sultry season" is that it must have been sultry—August. As to the connection in the mind of the writer between the sultry season and the interception of navigation, he was simply pointing out conditions as he found them, and he narrates his experience at that particular time; the only conclusion that could be drawn was his own experience at that particular time.

3172 In the sultry season when the water was low, of course those rapids would appear and it seems they did appear in that sultry season when it was sultry and dry. I should think it would mean that there was some connection between the sultry season and interception of navigation, and that if it had not been for the sultry season there would have been navigation.

"A remark that has been confirmed by meeting several traders on the plains who had transported their goods in boats and carts from Chicago Creek and who informed us that they thought it practicable to enter the Illinois at Mount Joliet."

3173 These traders evidently thought they could enter it at Mount Joliet. Going a little further, he says:

"It has been perceived that we ourselves began it far below this last mentioned point."

3174 There might be an inference to the effect that these traders thought they could enter the river at Mount Joliet at this season of the year, because generally speaking travelers and traders did enter the river there at that season of the year. That was in 1821. It does not say they did enter it. They thought they could enter it. He then says,

"This would lengthen the portage about thirty miles

but it has been perceived that we ourselves began it far below the last mentioned point."

That is forty miles below the junction of the Kankakee and the Desplaines, down at the mouth of the Vermillion.

"This fact is sufficient to show the error of those
3175 who suppose that a canal of only eight or ten miles would be necessary to perfect the navigation between Lake Michigan and the Illinois. A canal of this length would indeed perfect the communication which already exists at certain seasons between Chicago Creek and the Desplaines."

He says,

"This would perfect the communication which already exists at certain seasons between Chicago and the Desplaines."

I would judge from his language that at certain seasons a canal of eight or ten miles would perfect communication, at certain seasons.

3176 He probably means navigation; that is the interpretation I would give. Where he says, "but must fall far short of the grand purpose," I think what he would have in mind there would be to connect Lake Michigan with waters that would be navigable at all seasons of the year. He says it would take a canal longer than eight or ten miles to accomplish that grand purpose. He points out above that this fact, referring to his experience, and that his ideas concerning the navigation had been confirmed—is sufficient to show the error of those who had supposed that a canal of eight or ten miles was sufficient.

Having read the next paragraph "but although" I don't know that Schoolcraft referred to the opening of the canal, which would make possible the navigation of the water-
3177 way by large boats which were then coming into use. I see nothing here in connection with it.

3178 From the reading of this excerpt he says this journey produced a conviction that the difficulty and the expense which will attend this work are greatly underrated. I should put some weight on that; history has confirmed his conviction that the common opinion was wrong and that it did cost a good deal. The Illinois and Michigan Canal as finally constructed did permit vessels, as I understand, to go through drawing something like three or four feet of water and maybe more; I am not sure.

In determining the effect to be given these different statements from Schoolcraft, I think I have taken into consideration the accounts to which counsel has directed my attention, namely that after he made the general statement in his book of 1820 with reference to this portage and the use of these rivers for the purpose of navigation, after he had this experience going up the river in 1821 at a time when the water in the Illinois in places was only four inches deep, 3179 that in his latter works he still referred to this trade route as something which had been in existence for a hundred and sixty years, and which was so well established that it was thoroughly understood.

It is not my judgment, as a historical expert, that the only statement by Schoolcraft entitled to weight in determining as to whether or not boats could be made to go up and down the Desplaines river is this personal account of his in 1821. I would take them all into consideration and give them weight. I would consider his long portage, the meeting of traders who were actually making the portage of what they believed to be thirty miles, but which he believed at that 3180 time was over that; the fact that it was low water, and that he refers to interlocking waters. As I remember the latter reference, he simply referred to a number of portages by which one could reach the lower Mississippi region, and pointed out among others the Chicago-Illinois portage, and is not distinguishing or pointing out details as to how long or how short that portage is. He simply points out a well known portage.

3181 What he relates is his experience at low water. As to whether that would tend to disprove the statement as to the condition of the water at high water, would have to consider Schoolcraft in connection with all the other authorities, and not draw a conclusion in regard to navigability based solely on one authority, if I could find other authorities that would throw light upon it.

I should think that his statement in the book of 1820 that loaded boats of small class may pass over the lowest parts of the prairie during the spring and autumnal freshets, was true.

3182 I judge that it was true that at "midsummer it is necessary to transport them overland at Mount Joliet, a distance of 30 miles." I would take all of his statements into consideration, but not draw any general conclusion based

solely upon Schoolcraft if I could find others with whom I would weigh his statements. In my direct testimony I based my conclusion on his actual experience, and what he found to be true by the meeting of the traders.

3183 Referring to the statement in Schoolcraft's book of 1820, where he says,

"But at midsummer it is necessary to transport them overland to Mount Joliet, a distance of thirty miles. From thence the navigation is good at all seasons to St. Louis, a distance of 400 miles,"

as to whether I have found any statement of any kind which takes back any part of that I would say, that we have his experience on the one hand and his general statement on the other, and I would want to compare those and I can only draw a conclusion by pointing out what his experience was and what his statement was.

3184 The only statement that he makes, as I recall, in regard to navigation below Joliet, is his own experience. I don't recall that I found anything except that experience in 1821, which tends in any way to modify the effect of the statement in the book of 1820.

3185 Nor do I remember having seen any statement after that experience of his in 1821, when there was only four inches of water in the Illinois, where he ever attempted to modify that general statement. I would not say that there were not any or that there were.

The fact that there were traders going down there whom Schoolcraft met would tend to show that there was commerce going to St. Louis via the Illinois river. I recall in that connection also my reference to Ethelbert Stewart, in which he says that in 1818, or 1819, the books of the fur company which may be had, show that the fur trade was just beginning at this period, which would point out that between 1812, the time of the massacre, and 1818, there must have been very little trade.

3186 As to whether, according to my school of historical criticism I would reject the general statement of Stewart and accept the particular experience of Schoolcraft, who met the traders, I would want to get all the evidence I could to confirm the point as to the amount of commerce that was in Chicago and going over the route at that time; then would draw my general conclusion based on all the evidence, giving due weight to any I might find.

3187 Q. Is it not a fact that the statement made by Keating with reference to the Desplaines, Chicago river and the portage, is substantially the same as the statement made by Schoolcraft in 1820?

Objection; whether or not it is will appear from the work itself.

A. He points out in one reference something which I note is substantially the same. He says:

"In very dry seasons it has been said to amount to thirty miles, as the portage then extends to Mount Juliet, near the confluence of the Kankakee."

I believe I recall having criticized Keating, for the reason that I found a conflict in the statements which he made and the statements made by other authors, one of which was with reference to the description of the climate and soil around Chicago, in which I contrasted Keating with Schoolcraft. Another was the conflict between the account found in Keating and some statements to be found in the writing of Featherstonhaugh.

3188 Q. And in this statement of Featherstonhaugh, as I recall it, it is said, in substance, that Keating was wrong and that one Jonathan Carver was right?

Objection, not substance of what witness testified to. He read the extracts where Featherstonhaugh on his own observation pointed out Keating's error, and then made a general statement to the effect that Carver was more reliable than Keating, who forever criticized him.

The WITNESS (continuing): In a general way I know who Jonathan Carver was. Presume I have not gone into him as thoroughly as he might be studied. From memory, it seems to me he traveled some time in 1778; maybe a little earlier. Have known in a general way that there was some question about the correctness of Carver. There has been some question, I believe, as to whether he really wrote the book or not. Have made no special study of that.

3190 If I were discrediting Keating on the basis of statements made by Featherstonhaugh, I would take into consideration what Featherstonhaugh said as to the accuracy of the observations made by Carver, because there I would have Featherstonhaugh's statement on the correctness of Carver; all those things would be taken into consideration.

3191 Have heard of Professor Bourne, a professor of History at Yale. He was a good man; wrote one of the

American Nation Series, I believe. In my determining as to the weight to be given to statements made by Keating, I would take Bourne's opinion as very good.

3192 I would not put it so strong as that no better historical critic than Bourne has written in this country in fifty years; during that period have had a number of good men, such as Jameson and Justin Winsor. It seems to me Bourne made a little study of Keating. I think I have, in the course of my investigation into Keating's standing, come across information on the part of Bourne, as to the standing of Keating as a writer.

3193 It seems to me I remember this statement by Bourne referring to Keating:

"To pronounce upon the worth of this part of the book, first hand intimate knowledge of the field of observation is required. This qualification William H. Keating, the scholarly and painstaking geologist and historian of Long's Expedition to the source of St. Peters river in 1823, possessed in a high degree."

I think I took that into consideration when I passed judgment on the credibility of Keating.

Within the last three or four weeks, since I have become interested in this case, I have read the review published in Volume 2, American Historical Review, by Professor Bourne, of the travels of Jonathan Carver. I read it within three or

four days; before and after I testified. I read it about
3194 a month ago, when I commenced examining Keating on these various authorities, and again during the course of my examination. Am fairly familiar with it. I think it was quite a careful study on the whole, and entitled to standing in the work of historical criticism.

3195 Since I used it in connection with my study of Keating, it would only be fair to point out what points I considered, and this I can explain by a little analysis of that study.

3197 I took Keating and found out what right he had to speak on the subject for which he was cited as evidence; that is, whether or not he was in Chicago and had been down over this particular route we have been talking about, and what were his sources of information concerning it.

I noted those things in submitting his work to the test to determine its weight as a historical source.

3198 In preparing myself to criticize Keating I took what he said on the subject I was considering and other

subjects and checked them up to see whether his statements on those other subjects were accurate.

Only in the cases I cited as furnishing the most striking instances, I do not recall that I took and followed any other instances out of their source.

3199 I reached the conclusion that,

"The carelessness revealed by Keating in his narrative along the Mississippi river and St. Peters would lead one to conclude that he was careless in all his work."

I should have added probably the carelessness observed in his statements concerning the territory around Chicago.

In testing the accuracy of a statement in a historical work, it should be checked up as fully as possible to find out whether or not the writer was a careless observer.

3200 Did not read all of Pooley's thesis which I referred to. I used it in connection with my thesis in reading my authorities. Have taken certain chapters and gone through these at different times. I have not made a

3201 careful examination of Pooley to test his accuracy. On the whole Pooley would be an accurate work. I can cite authorities to prove that he was so considered. I do not recall any inaccuracies of statement at the present time.

3202 I tried to find out the standing of the book. I did not check up his statements to make a critical examination of them, as I did of Keating.

The statement in Pooley appearing at transcript 2686 (Abst., 1097), which I have read into the record (reading) "Peoria, the oldest town in this part of the state, had been deserted in the closing years of the 18th century." I did not check up for the purpose of determining if it was inaccurate I don't know how accurate that statement is.

3203 As a historical critic, I would have to take that and test it and find out whether it was accurate or not. In connection with this, I did not check up to find out when Peoria was founded.

3204 There was an early ford there and traders settled I should say in the early part of the 19th century. I am not sure. The early settlers at Peoria were French and Indians. Their commerce would be the same as the commerce of the early French and Indians that were along the Illinois river in all these towns.

I did not check up to find out what the course of trade and commerce of the early settlers of Peoria was.

3206 My conclusion as to whether there was trade and commerce on the part of the early settlers of Illinois is that there must have been commerce immediately after the country was settled. In reaching that conclusion I did not consider that statement on Pooley nor did I cite Pooley in connection with this subject.

3207 My attention is directed to page 2691 of the record, the last paragraph:

"The importance of communication is shown by the fact that the chief cities, Quincy, Peoria, Rushville, Peru, Ottawa, Joliet, Elgin, St. Charles, Rockford and Galena were on or near the river."

As to whether in my opinion as a historical expert that passage tends in any way to show that the Desplaines river was not used by the settlers of Illinois prior to 1850, I 3208 would say I understand this simply to be a general statement which relates to the importance of communication and cites as evidence to the conclusion which he is drawing, the fact that these various cities were on lines of communication.

Q. Now, will you please read the question, Mr. Commissioner. It was a perfectly plain question and capable of a direct answer.

(Question read.)

A. Why, as I read this over in the light of the question which you have read I do not see that it throws light on that subject, and that was the answer I had in mind when I answered you the first time. It was not my purpose to evade that.

Q. Then your answer is it does not tend to show it in any way?

A. I do not think one could draw a conclusion one way or the other from that general statement.

Q. I am not asking you whether you could draw a conclusion from it; I am asking you whether it tends to show it in your judgment?

A. I think I have answered that—

Q. That it does not?

A. (Continuing)—in my general statement that you could not draw a conclusion one way or the other.

Q. Do you recognize as a historical expert any difference

between an authority which establishes a thing and a statement which tends to establish it?

3209 A. An authority which establishes a thing and an authority which tends to establish a thing?

Q. Yes.

A. It is pretty hard to say that any one particular authority establishes a thing.

Q. Now, you have said that that does not establish it. I am asking you whether it tends to establish it or not?

A. Tends to establish what, the navigability of the—

Q. No, just read the previous question, the latter part of it.

(Question read as follows: "In your opinion as a historical expert does that passage tend in any way to show that the Desplaines river was not used by the settlers of Illinois prior to 1850?")

A. Well, I think I have answered that by saying that I do not know that that throws light upon it. It is simply making a general statement—he is simply making a general statement there, Mr. Wilkerson.

Q. I am not asking you what you did not know; I am asking you to give us your judgment as to what you do know.

Mr. SCOTT. I object that the witness has answered. When he says it does not throw any light on it is the same as a categorical answer. Whether it does or does not throw any light on it, he has answered the question.

Mr. WILKERSON. Then do I understand you to testify that you did not consider that passage at all when you gave
3210 your testimony with reference to the trade and commerce on the part of the early settlers in northern Illinois?

A. No, I did not consider that in that connection.

I did not say that I had checked up in connection with the trade and commerce to find out the time at which Peoria was settled. It is my general recollection that it was established at an early date, as a French trading post; that is, after the French commenced coming into this western country, the earliest record of which was in 1673.

3211 I do not know when Peoria was established. I should say it would be within fifty years of that date, or sometime before 1700.

3212 There was settlement along the Illinois river, as I understand it, at Peoria, during the early period, that

is between 1673 and 1700, or thereabouts. After 1700, because of the Indian wars, from 1702 or 1703, down for the next half century there was not a great deal of settlement along the Illinois river.

Schoolcraft, I remember, says in 1721, that even the Indian population along the Illinois was so scarce that one often wondered if the early French writers had not overestimated the population when they wrote concerning that early time. I mean, 1821, for Schoolcraft. There would be nothing in that to indicate that this had been abandoned prior to 1721.

I simply located him too early.

3213 Joliet was established when those early French towns were established. I don't have the exact date in mind. I do not believe Joliet was one of the early French towns.

Have not read through Ford's History of Illinois referred to on Transcript 2692 (Abst., 1100). I know that there are some inaccuracies of statement. I did not check it up with this particular test for that purpose. I have never read the book through. Have used it for reference work and gone through it at different places at the time I wrote my thesis.

3214 Do not know how many pages I have read. I did not use it to find inaccuracies in this connection.

At Transcript 2695 (Abst., 1102) is a statement from Ford:

"In the year 1818 the settled part of the state extended a little north of Edwardsville and Alton."

Q. Is it your opinion as a historical expert that the statement of Ford's just read tends to show that the Illinois river was not capable of being used for commercial purposes in the portion of the state above those towns?

Mr. SCOTT. That is objected to on the ground that it is but a portion of the statement as to what was the settled part of the state.

Mr. WILKERSON. Well, read the whole paragraph. I had read what I regarded as pertinent on that subject. If you find anything more in there that is pertinent on the question of settlement in Illinois, please read it into the record. Do you find anything else that is pertinent on that subject there?

A. On the subject of the test?

Q. On the subject of the settlement of Illinois.

3215 Mr. SCOTT. Just read me that question, Mr. Satterlee, will you?

(Previous question read.)

Mr SCOTT. Further objection on the ground that the excerpt was not read on the direct as evidence, or having any bearing on the question of whether or not the Illinois river was capable of being used above those towns.

Mr. WILKERSON. I am asking you now your opinion as a historical expert as to whether that tends to show that it was not capable of being used above those towns.

A. The conclusion which you are drawing there is not the conclusion which I drew or the line of evidence for which that was cited.

Q. I am asking you to draw it now.

A. The conclusion which I would draw was that settlement comes in along the navigable rivers—

Q. You have not answered my question.

Mr. SCOTT. Go on with your answer, Mr. Lee.

Mr. WILKERSON. I am asking you as a historical expert to tell me what conclusion you draw as to whether or not that tends to show that the Illinois river above those points was not capable of being used for commercial purposes.

Mr. SCOTT. Now complete your answer. Counsel cannot know whether your answer is going to be an answer to his question until it is all in.

3216 A. And that it came in, historically in Illinois, along the Ohio river and then up the river running into the Illinois and the Mississippi river. That in the case of which you have asked me, settlement going up those rivers, had gone up by this time only to that point. It may have been navigable further. To draw a negative conclusion of that, I have not done so.

Mr. WILKERSON. Now I move to strike out the answer of the witness as not responsive to the question, and I ask that the question be read again to the witness, and I ask the witness to answer the question.

Mr. SCOTT. I object to the question because the witness has expressly stated that it does not appear from that whether the stream was navigable above the point to which settlement had then extended.

Mr. WILKERSON. I submit from the record there was no such express statement on that point. Do I understand you to say there is nothing in that which tends to throw any light whatever on whether the Illinois river above that point was capable of being used for commercial purposes?

A. I would not want to draw a positive conclusion upon a statement of that kind one way or the other.

Q. Would you want to draw any conclusion?

A. From that mere statement?

3217 Q. Yes.

A. Why, Mr. Wilkerson, I do not know that I would for this reason; there were evidently navigable waters that were not settled. Take it in 1800, there were some navigable waters that were not settled, and settlement was coming down these rivers and was coming up the rivers that were navigable, and they came up settling along the Illinois river in 1818, and had gotten that far. They might have gone farther.

On page 2730 of the record (Abst., 1115) I refer to this language in Ford:

Commerce from 1818 to 1830 made but small progress. Steamboats commenced running the western waters in 1816 and by the year 1830 there were one or two small ones running on the Illinois river as far up as Peoria and sometimes further. The old keel boat navigation had been disused; but as yet there was so little trade as not to call for many steamboats to supply their place."

In my study of trade and commerce through Northern Illinois territory, I did not make an exhaustive study of the old keel boat navigation. Though in connection with my thesis

I ran across references to the use of keel boats in carrying on the commerce of early Illinois. That is, what commerce there was in the early period before 1800, the period which Ford refers to as the period of old keel boat navigation.

I tried to find out what commerce went down this possible route, the Illinois river. I tabulated the kind of vessels or the manner in which they went down and found what statements I could throwing light upon the use of the rivers for commerce, whether they went down in keel boats or otherwise.

3219 I don't know how long the period of keel boat navigation endured.

Q. I want to know what you have done to inform yourself on the subject of what Ford meant when he referred to the "old keel boat navigation"?

Objection. Question assumes that there was a period of navigation definitely known as "keel boat navigation."

The WITNESS (continuing). I have stated that during this early period there were keel boats and other methods of transportation upon the rivers.

3220 Don't know that I can define the keel boat or describe it.

An editorial from the Peoria Register and Northwestern Gazetteer, transcript 2697 (Abst., 1102) which I read on my direct examination was written by the editor of the Peoria Register; a man named Davis.

In connection with my thesis, I had studied the Peoria Register and know that Davis made trips all through Peoria County and this Northern Illinois country to bring into his paper the result of his knowledge and his travels through it.

3221 Don't recall how long he lived here. It is my recollection that it was a number of years. He states in his editorials that he made these travels. Papers would be considered as primary sources. I regard the editorial as a primary source of information.

3222 He is speaking about the commerce of the town and along the river at the time he was writing.

McCarty, whom I referred to as the author of "Territorial Governors of the Old Northwest," was in the University of Iowa and wrote this book while he was there. I think he was on the faculty working in connection with Shambaugh. Have taken no steps to ascertain his training at the time he wrote this book. That would be a factor to be taken into consideration in determining the weight of his statement.

Don't know what other books he had written before this one.

3223 I have not examined the book critically. I do not recall finding any errors or a statement in it in conflict with other historical authorities. I presume there would be.

3224 There are likely to be mistakes in any work that would be worked out even most carefully. In using source authorities, I would weigh the evidence and take it for what it is worth. In my previous characterization of this work I have stated the weight I gave to it.

3227 I would take a statement from McCarty as suggestive and would want to corroborate it by such men as Turner and other men before I would draw or base a definite conclusion. I would not base a conclusion upon any one statement which I would find in McCarty.

3228 At transcript 2700 (Abst., 1103) I referred to Benton's Wabash Trade Route. I used it as a reference but have not read it through. Perhaps I used a portion of it a year or two ago when I was studying but never made any critical analysis of it for the purpose of determining whether or not it contains any inaccuracies of statement. I presume it has inaccuracies. I did not base a conclusion upon it solely.

3229 I would use it as suggestive evidence and base my conclusion upon a series of authorities which I would get to corroborate the statement. If I find such men as Turner, Semple and other writers on Western history corroborate it, it would be submitted as evidence.

3230 Q. Now, in order that we may apply to these statements in Benton some of the tests which you say you applied to Keating, I will ask you to read into the record, commencing on page 9:

The WITNESS (reading): "The earliest expeditions from the French settlements on the St. Lawrence to the upper lakes followed the course of the Ottawa river rather than the upper St. Lawrence. Successive expeditions pushed the route farther west until under the leadership of such intrepid explorers as Jean Nicolle, Allouez, and Marquette there was developed about the middle of the seventeenth century what may be regarded as a westward highway for the French, continuous from the settlements on the lower St. Lawrence to the Mississippi valley. The voyagers' canoes followed the Ottawa river from Montreal then by portage to Lake Nipissing, and to Georgian Bay, an eastern arm of Lake Huron, and thence by the northern lakes to Green Bay, the Fox, and by portage to the Wisconsin and Mississippi Rivers. It was the most natural route because in every way it was the line of least resistance. It avoided the near
3231 approaches to the Iroquois Indian limits and led directly to the numerous Indian haunts around the greater lakes. As the objective point for the westward expeditions was gradually moved farther south in the Mississippi basin, shorter routes across the territory, later known as the Old Northwest, were used. The Wisconsin portage soon yielded in point of frequency of use to those at the south end of Lake Michigan. The route up the Illinois river and by portage into the Chicago river and Lake Michigan was followed by Joliet and Marquette on their return from the discovery of the

Mississippi. A few years later La Salle followed the coast of Lake Michigan to the St. Joseph river and up that stream, thence by a portage to the Kankakee, and so again to the usual destination—points on the Illinois and the Mississippi.

3232 About this time, in the course of the evolution of new routes leading to the Mississippi, occurred the first use of the Wabash river by white explorers. This stream was occasionally reached in the earliest period by leaving Lake Michigan on the St. Joseph river and then by a short portage to the headwaters of a northern branch of the Wabash, but the more important way to reach it was by the 'Miami river of Lake Erie' and a short portage. Of the five great portage routes, this was the last one to come into general use by the whites. It proved to be the shortest route connecting the lower French posts on the Mississippi with those on the St. Lawrence and has been quite happily called the Indian Appian way. It was a common highway for the various Indian tribes of the Northwest. The French routes were in almost all cases the watercourses, portage paths, or overland trails in earlier use by the Indians, who now became the guides. The portage from French creek to the Allegheny was used by La Salle, but its importance dates from a much later period, when it came to connect strategic points on the English frontier. In the race with the English for the occupation of the interior, the French gradually drew the cordon tighter. The paramount task for them was to keep in ready and rapid communication with one another and with outlying posts their two commercial and political centers, Quebec and New Orleans."

The foot note is "Winsor, Narrative and Critical History, Vol. IV, p. 224," gives the following:

"(a) Green Bay, Lake Winnebago and Fox river to the Wisconsin river and to the Mississippi.

(b) From the upper end of Lake Michigan, the Chicago river, and a short portage to the Desplaines and Illinois rivers.

(c) The St. Joseph of Lake Michigan, a portage to the Kankakee and so to the Illinois river again.

3233 (d) The St. Joseph river to the Wabash by a longer portage and then down to the Ohio and Mississippi.

(e) The Miami of Lake Erie, a portage to the Wabash and down as above."

In order to make a careful test of that I would have to do as I would with an excerpt from any other book, to make a comparative study of statements I would find in other places.

The first part seems to be correct where he refers to the general movement on the St. Lawrence river and then to the west by the way of the Wisconsin, Green Bay route as first; as to whether the Wisconsin portage yielded to the use of the southern route and when that yielding was, I am not certain.

3234 I say from my general knowledge it is correct. I am not sure whether it is or not. I have no reason to doubt its accuracy, as I don't know whether or when the Wisconsin did yield to the southern portages down by the way of the Illinois river. That the southern route was used is clear. My knowledge was that most of the commerce went by way of the northern route, Green Bay, Wisconsin. I have not checked that passage. One reason I hesitate to except that statement is that if they came down the southern route about 1700 they would have met the Indians that were warring in Illinois and by coming to the southern part of the lake they would meet storms. There was no harbor there at all.

I find that was true from the original engineering reports of 1832 and on.

3235 I find some reference in Keating that there being no harbor, there was but little commerce at Chicago. I do not know that I can locate the various tribes of Indians; they moved about at different places. Do not know that I can tell where this Fox Indian war was. The Indian wars
3236 of the different tribes were down along the Illinois river.

I find a further reference in this in a footnote taken from Winsor's Narrative and Critical History where there is a reference to one of the routes as being from Lake Michigan, the Chicago river and the short portage to the Desplaines river and Illinois river. I cannot test the statement as found in Benton as to accuracy by merely reading it over once. I have found reference to the portage; sometimes portages to the Desplaines river and sometimes reference to a portage from the Chicago to the Illinois river.

3237 Winsor's works are recognized as being good; he was a very good man. I have not put Benton in the class I would put Winsor's works. I would call Winsor a care-

ful writer. It is pretty hard to put historians in a class. Winsor had acquired a wide knowledge of history and bibliography and has published widely.

3238 It is hard to make comparisons.

I would say Semple was a careful writer. Winsor has published more widely and knew more general history and his book has a good reputation. I have referred at transcript 2707 (Abst., 1107) to Turner's *Rise of the New West*. The use of the words, "New West," would indicate that he was dealing with the development of the west, meaning west of the Alleghenies.

3239 Turner treats the frontier movement as being constant, never fixed, but shifting. The original frontier was east of the Alleghenies. Settlement was along the various rivers that flow into the Atlantic, and finally came up then and over the Allegheny mountains. So it would depend upon the time you are speaking of what the old west would be. At the present time, I presume the old west would be this territory east of the Mississippi as compared with the west beyond the Mississippi.

I have used Turner's *New West* as a reference book. I have not personally put it to the test or carefully examined it. I know its standing among historians. Probably there would be inaccuracies even in Turner's work.

3240 I do not recall any now. I did not subject it to a test that one possibly ought to before they would draw a definite conclusion upon it. I know what the reviewers think of it, and the general standing of Turner and his books. He has a good standing, and is recognized as an authority and his conclusions are, generally speaking, accepted by historians as entitled to great weight. If Turner's conclusions would be found wrong after subjecting it to a test, the result would be the same as in case of any other man's error.

3241 His judgment upon facts relating to Western history would be good. If Turner reached one conclusion and somebody else drew a different one, Turner's conclusion would carry weight, but if two noted historians differed in opinion and a third wanted to know which was right, he would make a study of it. For example, if upon the same state of facts, the same historical references, Turner reached one conclusion and Hulbert, for instance, another, many historians without making independent investigations consider-

ing only the reputation of the men, greater weight would attach to Turner's conclusion.

3242 Taking the time before Turner wrote this book, 1818 to 1829, the early settlers of Illinois were of different nationalities and came from the south, Virginia, Kentucky, and other southern sections. The French began settling at these places and we find that at the time that George Rogers Clark made his expedition he found the French and Indians living together. They had intermarried and were living in these towns along the Illinois river.

3244 I made no particular study on the subject of trade and commerce in the settlements of Cahokia and Kaskaskia and the nature of the business and commerce that was conducted from those places. I have forgotten when those towns were established.

COUNSEL FOR DEFENDANT. The first French Kaskaskia was on the Illinois river near Ottawa.

3245 I know there was a Kaskaskia, but don't know whether or not the first town by that name was on the Illinois river. The French were carrying on quite an extensive fur trade during that period concentrated primarily at New Orleans, as it had even from the earliest period down until after the English had gotten hold of this Illinois country.

3246 Du Pratz tells us something about this subject on trade and commerce throughout Illinois from the time it commenced here. Have read Du Pratz but have not made a critical examination of his work. Don't know that I would want to say exactly what his standing is. As to whether he is generally accepted among historians as stating facts correctly with reference to this history of this period, I would want to subject his statements to tests that I would subject statements of other men to.

3247 Would get all the information I could concerning that early period. Have examined in a general way these early writers. Heward's Journal tells us about a trip he made here at a later period. Hubbard tells us about a trip through this country in the fur trade. I would not check Du Pratz with Hubbard.

I would want to make a study of the authorities. I have pointed out Heward's journal to give an idea of the commerce of those early periods.

3248 After which would check it with the facts as I could find them from checking of the various authorities. Would look into all of them as carefully as I could.

As a historical critic to determine whether the statements in DuPratz were accurate or inaccurate I would find out
3249 who his contemporaries were and whether DuPratz had a right to speak about this early period. Would find out what his own experience was and his knowledge of the commerce of this particular period and would weigh his evidence and see if his statements were prejudiced.

I have applied those tests to Hutchins, cited by the government which I criticized. I did not apply it so carefully to Darby as to some of the others.

3250 I applied probably all of them to Imlay; enough at least to determine in my mind what weight his statements would have.

To determine who were the contemporaries of DuPratz I would go to some of the manuscripts that are not published yet.

Morgan was a trader in Illinois. Was a little later than that period, about 1764, or a bit later. From memory, Morgan was a trader in Illinois that the English got into this territory. A Pittsburg firm sent him here to get control of the fur trade of the Illinois country.

3251 I believe his headquarters were at Fort Chartres in the general territory across from St. Louis.

In a general way, I know Morgan was trying to get the trade into the hands of the English and direct it up the Ohio to Pittsburg. The French were coming into Illinois territory and practically taking the trade from Morgan and those various traders sent out by the English and were sending it down to New Orleans as they had always done. I am drawing now from my general knowledge of the facts.

3252 To get this information, I would refer you to Carter's Illinois Country from 1763 to 1764, which deals with the subject. He wrote this book under the supervision of the men at the University of Illinois. In his preface he expresses his gratitude for aid and encouragement to Professor Evarts B. Green in whose seminar at the University of Illinois the essay was begun and to Clarence W. Alvord, whose intimate knowledge of the field had been of material assistance through his study.

3253 Evarts B. Green is not a contemporary of DuPratz.

I would go to the manuscripts of Hutchins in the Pennsylvania Library, unpublished.

My previous answers will answer the question as to what work I have done in preparing myself to give the information

in this case with reference to the nature, extent and
3254 course of the commerce which was carried on by the
French settlers in Southern Illinois throughout the pe-
riod commencing early in the eighteenth century and running
to about 1820. I have not checked up DuPratz. At the time
I cited DuPratz I told you I was simply citing him from my
general recollection.

3255 I would cite Carter's Illinois Country as a reliable
work that deals with the general subject and conditions
of trade.

My attention is directed to the statement from Keating and
a statement of Schoolcraft relating to the soil and climate,
which counsel states I have said is in conflict in such a way as
to discredit Keating. (Transcript, 2855.) (Abst., p.
1161.)

3256 The specific locality of which Keating was writing was
Chicago and vicinity. Just what he means by that is not
clear. How much he would include in it, I do not know. He
says: "There are also a number of destructive birds of which
it was impossible for the garrison to avoid the blackbirds that
committed depredations upon the cornfields there."

3257 My general knowledge is and the facts seems to be
that the nature of the soil at Chicago as it then existed
was such that agriculture and gardening could be carried on
here. The side of the old fort was swampy and marshy. The
present land here is made land, all along the south side as
far out as the University of Chicago.

3258 I never made a careful examination of the exact nature
of the soil here in Chicago.

The site of the old town was right here on the Chicago river.
I presume we had winds then as we have now coming from the
lake. There was very little agriculture in Chicago previous to
1830 or in northern Illinois. The reasons being that the pop-
ulation did not come until the after harbor was built in
3259 1822 and 1823. There were not many farms within ten
miles of the old town of Chicago.

Chicago might be inundated in the region between here and
to the west; was inundated in the spring. The statement in
Keating, "But even with all these exertions, the maize seldom
has time to ripen" seems to me as a historical critic to be in-
accurate.

3260. I think that is the most notable inaccuracy in this con-
nection. We do raise corn and the seasons are about
the same to-day. I don't know just how near but I presume
it has been raised in the city. I do not think the statement

where he refers to the exposure to the cold and damp winds which blow from the lakes with great force during most of the year, would injure gardening or agriculture at that time. It does not now to the extent that you cannot raise maize at least.

Q. "The difficulties which the agriculturists meet with here are numerous; they arise from the shallowness of the soil and from its humidity and from the exposure to the cold and damp winds which blow from the lake with great force during most of the year." How would you think that would apply to Jackson Park?

Objection; immaterial.

A. Jackson Park is not the original soil, as I understand it, and you would have nothing there that would apply, 3261 so far as the shallowness of the soil was concerned.

I should not think you would have to go back six or seven miles from the lake in order to raise maize because of cold and dampness.

The winds that came off of the lake and the exposure to them is one of the factors that have to be taken into consideration, but trees and corn do grow. I should not 3262 think that the cold and damp winds mentioned by Keating were sufficiently strong so that vegetation could not grow here at that time.

Keating does not say it would not grow at all; he names a number of difficulties.

3263 He says, "The best comment upon this description of the climate and soil is the fact that with the most active vigilance on the part of the soldiers it is impossible for the garrison, consisting of from 70 to 90 men to subsist upon the grain raised in the country." Then he names those difficulties.

To determine the accuracy of that statement I have tried to square it with my knowledge of the facts and descriptions given by men of the time and contemporaries. Schoolcraft, Transcript, 2858 (Abst., p. 1162), says, "The country around Chicago is the most fertile and beautiful that can be imagined." I would judge he was speaking of a somewhat larger area of country.

3264 Evidently to the mind of Keating, they were speaking of the same territory, because he refers to Schoolcraft and makes a contrast between the conditions Schoolcraft pictured and those he himself found. Keating says:

(Transcript, 2855; Abst., 1161): "We were much disappointed at the appearance of Chicago and vicinity; we found in it nothing to justify the great eulogium lavished upon it by the late traveler, who asserts that it is the most fertile and beautiful country that can be imagined," etc. He then refers to Schoolcraft and points out the differences.

3265 Schoolcraft I think was writing in 1821 and Keating, if I remember correctly, in 1823. There might be some difference in the seasons.

Q. Now treating what Keating says as the site of Chicago and the country directly connected with it, and treating what Schoolcraft says as a general description of northern Illinois, having in mind what he says in the second sentence where he says there are a number of clear streams and rivers which throw their waters partly into Lake Michigan and partly into the Mississippi river, do you still think that there is such a discrepancy between the statements of Schoolcraft and Keating as to justify your conclusion that other statements of Keating are to be discredited because of the alleged inaccuracy in connection with this description?

Objection; the question does not represent nor is it based on what Schoolcraft says; he does not speak of northern Illinois; he speaks specifically of the country around Chicago.

3266 A. I still think that would be one of the lines of evidence to point to his carelessness. I have cited others that would corroborate this one line and I have pointed out specific things which I had in mind there when I called attention to the statement he made. Considering this one discrepancy, I would simply hold it as evidence that Keating was careless. I do not know as I would draw a positive conclusion based on this one line of evidence discrediting him. Were I writing a book and it could not be corroborated I would append a footnote that I found signs of certain inaccuracies.

3267 Schoolcraft says, "Diversified and gentle slopes sometimes attaining the elevation of hills." We would find bluffs along the Desplaines river. I do not know how far from Chicago. The general area around there is flat. Keating calls attention to the fact that Schoolcraft was describing conditions which he did not find.

Q. Isn't it possible Keating may have thought that Schoolcraft was describing the country right at Chicago and may

have pointed out the reference which he gave with that
3268 in mind, the fact being that Schoolcraft described a
larger country and that Keating had misunderstood the
country he was describing?

A. It might be possible he would put a different interpretation upon it from what you have.

He not only expresses disappointment because Schoolcraft's description had lead him to expect something different at Chicago, he goes ahead and points out difficulties and names them specifically.

3269 Schoolcraft has been considered a good historian and

I think the presumption, without making a study, is in favor of accepting Keating because of his official position and the training he had, but such a presumption could not stand against fact which are stated and which may be brought to light upon further investigation.

Q. With respect to the general statements of Keating and Schoolcraft concerning the use of the Desplaines
3270 river, which do you think is entitled to the higher degree of credibility?

Objection; assumes there are general statements of Keating of actual use of the Desplaines river.

COUNSEL FOR COMPLAINANT. The question was with reference to use not actual use.

A. I refer you to my direct testimony on that point.

Schoolcraft was in a better position to know concerning the use that was made of the river than was Keating, so I would give greater weight to Schoolcraft's statement.

At transcript page 2859 (Abst., p. 1163) is a reference to a place given by the French a certain name which is there translated or interpreted "The mountain which is steeped in water."

3271 I do not know whether that is a correct translation of the French. I would refer that to a linguist.

I testified with reference to these two translations of Charlevoix. As to the basis of my statement with reference to the correct translations of Charlevoix, I submit the testimony and the translation. It would have to be tested by a French student. To my knowledge I conclude it was correct. I had read that part of it.

Q. Having in mind your critical analysis of this
3272 passage of Featherstonehaugh what in your opinion was the origin of the name of the mountain there referred to?

Objection; no critical analysis was made of this passage or deductions drawn from it; Featherstonehaugh's criticisms of Keating were merely read.

A. Featherstonehaugh stated that the place was inaccurately described. I do not know the probable origin of the name of the mountain. Have not made an analysis of the original of that name at all.

3273 My attention is directed to the Geological Report by Featherstonehaugh, page 129. The passage reading:

"It is evident that the Mississippi has once passed north of this out-lier, has covered the prairie, then a lake, and has coasted the distant eastern bluffs. This affords another incontrovertible instance of that remarkable reduction of the fresh water level of this continent, before alluded to, at which period the contracted channel left the then lake, and cut off the Trempe a l'eau from the right bank. Ompedo Wakeen, brother to Wabeshah, a celebrated chief of a neighboring band of Nacotahs, told me, on the evening of the day I visited the place, that the Indians called it Minnay Chonkahah, or Bluff in the water, and that they resorted to it at the beginning of the wild geese season, to make offerings to Wakon, or the deity, for success in hunting.

3274 A few miles higher up, there is another prairie on the right bank, where Wabeshah's band have their lodges; and about half way from this place to Lake Pepin, is another, on the same side of the river, still more extensive, and bordered with cedar trees."

From the passage, "It is evident that the Mississippi has once passed north of this out-lier" I presume that at times of high water the overflow passed on the other side from where it now runs.

The inference from the statement is that the Indians resorted to this place in the hunting season to have religious rites.

3275 From the statement that the water had covered the prairies and the lakes, I judge that sometimes this mountain or bluff was, as I understand, all water.

I do not know that the inference is to be drawn that the mountain was surrounded by water at the beginning of the wild geese season.

Don't know whether that is to be found there or whether he is referring to an earlier period when the first water level

was higher than it is now. I would have to know more of the context and more of the region up there to draw an inference.

At Transcript, 2860 (Abst., p. 1163), in the passage heretofore read into the record by me, "The same constant character of the valley is observed here, a rich bottom two or three miles wide, broken into islands and swamps and ponds," I know what is referred to as "bottom lands."

I believe there is a distinction between first bottom and second bottom land. When he speaks of rich bottom two or three miles wide, I do not know whether he means that all of that bottom is overflowed or not.

Q. Calling your attention to the statement that it was broken into islands, swamps and ponds, would you say he meant first bottom or second bottom?

Objection; incompetent and immaterial.

3277 A. I do not know that I am here to draw any conclusions as to what kind of bottom was there referred to. He would refer to the bottom land that would be wet and swampy, and there would be ponds of water there; perhaps hillocks entirely surrounded by water.

I have made no test of the actual land to find out whether or not Featherstonehaugh has correctly stated the characterization of this spot by Keating. To test the accuracy of Featherstonehaugh's statement have tried to find out what his standing was, what right he had to speak in regard to the land to corroborate one or the other of those men by other lines of evidence.

I found that Featherstonehaugh was a reliable man holding equal official position with the man he criticized.

3278 I do not know whether he held a better position; he was on two or three expeditions. One along the Arkansas river and two others as a government employe. Was engaged by Great Britain in the Webster-Ashburton controversy. Among Government officials I found that Cass praises him highly, and states that he is editing a paper that is very reliable and deserving of greater support than it has secured. I found further that he had with him the travels of men who had preceded him, such as Carver and Keating and was making comparisons continually. From my reading of the evidence, I found out Keating's official position and training and verified my information.

3279 I found Professor Bourne referring to Keating as reliable authority. I recall no other similar passages,

though I tried to find them and I gave these men as fair a critical analysis as I could.

I tried to find out what the fact was concerning this conflict and found one citation which I do not now recall.
3280 To resort to primary sources of information for determining which was correct before criticising this particular passage of Keating's would require a knowledge of the land, which I have not, and which Professor Bourne says he has not.

I am not sure that I have examined the passage from Keating referred to by Featherstonehaugh. I think not.

3281 I cited Featherstonehaugh as pointing out that he was careless and the reasons why he was careless.

3282 Did not reject Keating wholly on what Featherstonehaugh said Keating said. I took another line of evidence to find out whether Featherstonehaugh was capable of speaking on that. Featherstonehaugh refers to the passage in Keating, Vol. 1, page 271. Before stating my conclusions with respect to this passage, I think I went back and

3283 verified it. If I could see the passage probably I could state. Cannot find it. The citation is incorrect. It does not tell the edition here.

The passage on pages 280 and 281 of the volume of Keating which I hold in my hand does not seem to be the exact reference.

Whereupon counsel for complainant read as follows, p. 280:

"On the evening of the 28th, the party reached the spot which has been described, by all travellers, as a great natural curiosity, though, in fact, it presents nothing extraordinary. It is termed by the voyagers, the
3284 Montagne qui trempe dans l'eau. This, which we understand to be but the translation of the Indian name for it, means 'the mountain that soaks in the water.' It is a rocky island corresponding with the adjoining bluffs, and separated from the left bank of the river by a narrow sluice. This insulated portion of highland appears, when seen from a distance to stand in the middle of the stream, and its base is washed by the water; but on approaching towards it, it is found to be very near the east bank of the river; and as well as the party could judge from the opposite bank, along which they were coasting, there was at that time, but little or no water between the 'mountain' and the left bank. Pike has, in his journal,

stated its height at about two hundred feet; from a trigonometrical admeasurement of it, made in 1817, Major Long estimates its elevation at five hundred feet; although his instruments did not allow him to take his measurements with the greatest accuracy."

The WITNESS. (continuing): This mountain referred to on page 280 of Keating is probably the same one Featherstonehaugh is referring to. The name is a little different. The English "the" being used for "la."

3285 I do not believe I have ever seen the particular passage just read. If so, I did not read as much as you have.

Q. As a critic of historical material do you find any serious conflict between Keating's statement that "As well as the party could judge from the opposite bank along which they were coasting" there appeared to be little or no water between the mountain and the east bank of the river and Featherstonehaugh's statement on the same subject which you introduced in the record?

3286 Objection; the statements will determine for themselves; no deduction by the witness is necessary; it is not a historical matter but a topographical description.

A. As to what difference there is would have to have more time to determine because it is evident from Featherstonehaugh's report that he conceived that there was a difference in the description. It might have occurred to a historical critic that Featherstonehaugh might have been inaccurate and Keating accurate, but he would have to corroborate the two men.

I did not examine this book to make a comparison before I rejected Keating.

3287 Keating says:

"It is a rocky island corresponding with the adjoining bluffs and separate from the left bank of the river by a narrow sluice. This insulated portion of the highland appears when seen from a distance to stand in the middle of the stream and its base is washed by the water, but on approaching towards it, it is found to be very near the east bank of the river."

Featherstonehaugh says:

"It is in fact an isolated bluff about a mile and a quarter in circumference, separated from the right bank and not from the east. The intervening space being occupied by the present main channel, and as well as the party
3288 could judge, from the opposite bank, there was at that

time but little or no water between the mountain and the left bank."

Keating uses the word "appears." It is simply a conflict in detail. I believe the only point Featherstonehaugh was trying to make is as he says, "This error was no doubt occasioned by the writers' looking at it from the right bank and not stopping to examine it," which is pointed out in Keating's excerpt itself. Keating stated what appeared evidently to him, and does not indicate whether he stopped to examine it or not.

3289 Keating says, "On approaching towards it, it is found to be very near the east bank of the river."

He speaks of it as it appears when seen from a distance, but on approaching towards it, it is found to be near the east bank of the river. It would simply be one line of evidence that would point out that he did not take time—

3290 Q. Has he not been very careful to state just what he did do in the way of making an investigation?

Objection; whether he was careful or not appears from the passage.

A. It is not quite clear whether he did stop. I would judge that he did not make a careful examination of it. I do not know as I would state that he was careful to say that he had not. He describes the situation as he saw it.

3291 I would call it a statement of a fact which Featherstonehaugh found was not true, according to Featherstonehaugh's statement. Whether it was true or not, since I have made no examination of the particular ground, I could not state.

Motion by counsel for complainant to strike out as not responsive.

I do not know that that would indicate carelessness. The question would be as to whether his observations were correct or not. I am not sure whether I ran onto that reference to Featherstonehaugh myself or whether it was called to my attention by Dr. QuaiFFE.

We first came into connection with Featherstonehaugh by the study of Schoolcraft where a letter had been written
3292 by him to Schoolcraft.

We looked up Featherstonehaugh to find out who he was and what authority he had to speak and to verify the statements made, as best we could.

3293 We had all those books on the table before us, which is the reason I could not answer a while ago as to

whether I did go back and look up Keating a second time after I looked this report up.

I found this report in one library and we used Keating in another. I do not think Featherstonehaugh was careless and inaccurate in his statement of what Keating had said on the subject, in the light of the passage in Keating itself. He says, 'This error was no doubt occasioned by the writers' looking at it from the right bank and not stopping to examine it.' That would involve a knowledge of that particular ground as to which was correct.

3294 One calls attention to the fact that the bluff was isolated and the other says it was close to the bank. It is not my impression that Featherstonehaugh made a careless quotation of what Keating said.

Keating says it is a rocky island corresponding with the adjoining bluff and separated from the left bank by a narrow wall.

Featherstonehaugh says, "This curious peak has been represented as 'a rocky island separated from the left bank of the river' and to be 'very near the east bank of the river.' " From reading Featherstonehaugh I did not get an entirely different opinion from what Keating said than from the reading of the passage in Keating.

3295 It is not my opinion that the particular part in the quotation marks unfairly represents what Keating himself says on the subject. I think that would be accurate.

3296 Since Featherstonehaugh points out how the error likely occurred, it seems a fair interpretation of what is pointed out there.

Keating was giving an official report of the land and it was Featherstonehaugh's duty to give a correct description of it; he found an error in one report and pointed it out.

3297 Q. Featherstonehaugh does not state a reading of Keating would show the line of description which Keating had made, does he?

Objection; incompetent, irrelevant and immaterial; no historical witness or critic is competent to say what is stated; the statement is in the record.

3298 A. I think I have answered that. Cass pointed out as the reason that the paper which Featherstonehaugh was editing was not securing the support it deserved as that the public did not appreciate the value of the careful geological

work that was being done. That is my recollection. That indicated to me that Cass thought he was a careful writer.

Q. And that those engaged in that profession generally thought so?

Objection; there is no evidence from the witness as to any others engaged in the work generally.

Q. Did you find out whether there was anybody else engaged in geological work?

Objection; incompetent, irrelevant and immaterial.

3299 A. No, I simply cited that reference indicating what it meant to my mind as to the standing of Featherstonehaugh. The disagreement between Featherstonehaugh and Keating is one line of evidence which would lead me to discredit the statements of Keating, generally, and shows that his contemporaries thought that he was a careless
3300 observer. That Featherstonehaugh at the time he was making this investigation had with him the record of Keating and the record of Carver, and of men who preceded him, and was making a comparison, not only with each other, but a comparison with the facts as he found them, and was drawing his conclusions in the light of that test; hence, whenever Keating would not square with the facts as he found them, it would be one line of evidence.

I went through Keating and made an analysis. There-
3301 after I looked up Featherstonehaugh. I do not know whether I went back to Featherstonehaugh or not. Do not think I made a second examination of Keating.

3302 If, upon examination, it was found that one authority was incorrect, and the other was correct, in their actual description, the conclusion which the historian would draw, would be that it would be subject to further study.

3303 Q. Have you concluded that the statement of Keating with respect to the matter referred to on Transcript
2861 should or should not be rejected?

Objection; incompetent, irrelevant and immaterial.

A. I would simply conclude that this is one of the lines of evidence that would have to be taken into consideration in drawing a conclusion in regard to Keating's standing. Concerning the accuracy of the statement, I do not know. I have not drawn any conclusion and I would draw none until I did know. I would accept Keating with the greatest of caution because of the lines of evidence I have pointed out.

3305 I have stated lines of evidence that point to Keating's carelessness and I adhere to my conclusion that he was a careless observer. I see nothing that has been pointed out to me in this examination that would lead me to change my general conclusion stated in my direct testimony.

3306 I would adhere to the statement that Keating's "generalities based evidently upon Hopson's statement must be rejected." I have been preparing those conclusions which I read into the record the last three or four weeks.

3307 I was working on them while I was giving my testimony. They were prepared in my study at home. I wrote them out in longhand and handed them to a stenographer.

I talked over those various notes with Mr. Scott before they were put in final form. All those general conclusions which I read into the record at the close of my testimony, I had prepared before.

3308 As to Featherstonehaugh's criticism of Keating I drew my conclusion independently. I talked over the line of evidence and my final conclusions with Mr. Scott. I do not recall that any changes were made after the interview. I do not know that I can point out any particular passage in Keating showing that he referred to the same tribe of Indians referred to by Featherstonehaugh.

3310 I did not make any further study of this than I did of those others. Simply, I cited it as one line of evidence which Featherstonehaugh regarded as indicative of Keating's carelessness. If I were making a critical analysis of Featherstonehaugh would check him up with all the authorities I could find: among them Keating. If I found that a number disagreed with him and they disagreed with Keating, I would weigh all of those in drawing my conclusions.

I have not made an examination of ethnological authorities to determine whether Keating or Featherstonehaugh was correct as to the name of this Indian tribe.

3311 If I found Featherstonehaugh was incorrect and careless, all of those things would have to be taken into consideration in weighing Keating.

In connection with my criticism of Keating, I did not read the article in Bulletin No. 30 of the Smithsonian Institution, Bureau of Ethnology, Published in Washington in 1907, pages 376, 377. I know of the Bulletin and what general subjects

it deals with; Indians and various researches. I am not
3312 familiar with the article. I do not know what standing
it would have as an authority among historians. It is a
government publication and the presumption would be in fa-
vor of accepting this as reliable authority. The title reads,
"Smithsonian Institution. Bureau of American Ethnology.
Bulletin 30. Handbook of American Indians north of Mexico.
Edited by Frederick Webb Hodge. In two parts. Part 1.
Washington. Government Printing Office. 1907." I do not
think I ever heard of the author nor do I know his standing
among ethnologists.

3313 Referring to pages 376 and 377, the heading, "Da-
kota," I read:

"Dakota ('allies'). The largest division of the
Siouan family, known commonly as Sioux, according to
Hewitt, a French Canadian abbreviation of the Chip-
pewa Nadowe-is-iw, a diminutive of nadowe, 'an adder,'
hence 'an enemy.' Nadoweisiw-eg is the diminutive
plural. The diminutive singular and plural were applied
by the Chippewa to the Dakota, and to the Huron to dis-
tinguish them from the Iroquois proper, the true 'ad-
ders' or 'enemies.' According to Chippewa tradition,
the name was first applied to a body of Indians living on
an island somewhere E. of Detroit (W. Jones).

Dakota, Nakota, Lakota are the names used by them-
selves, in the Santee, Yankton, and Teton dialects, re-
spectively. J. O. Dorsey, in his classification of the
Siouan languages, divides the Dakota group into 4 dia-
lects: Santee, Yankton, Assiniboin, and Teton."

3314 In connection with this I could not draw a conclusion
one way or another as to whether Keating's designation
of this tribe of Indians was wrong and Featherstonehaugh's
was right. I simply know from recollection that Feather-
stonehaugh said he made careful inquiry in regard to that
point and he found they were called by that name, while the
other name was incorrect.

3315 Keating called them by the other name.

The standing among historical writers of the publica-
tions of the Smithsonian Institute is generally high.

Not quite knowing the standing of this book, I do not
know whether a historian who is endeavoring to get correct
information as to ethnological facts would turn to it or not.
It may be correct or incorrect. A book which deals with
such wide subject-matter is open to second hand material.

The passage in Featherstonehaugh referring to this Indian name reads:

3316 "I made particular inquiries amongst the chiefs, through my interpreter, and they all concurred in the assertion that their proper name was Nacotah. This word means united or allied people. Dacotah means, 'My relations.' "

My attention is called to the fact that the article in Bulletin 30 interprets the word as "ally." In Featherstonehaugh's footnote "this" I presume refers to Nacotah, and he says it means a united or allied people. Dacotah means "my relations," and I would judge from this parenthesis in the Bulletin to which you refer that the meaning of Dakota would be "allies."

3317 I am not sure just what distinction there would be between "my relations" and the related or allied people, in the significance of the name.

Q. I direct your attention further to the review of the different names given to the Indian tribes found on page 379 of this Bulletin No. 30, and I ask you whether or not it is not true that the only writer who has used the word Nacotah as referring to an Indian tribe, is Featherstonehaugh?

Objection; no foundation for the question. Witness does not claim nor is he shown to have examined every writer outside of Featherstonehaugh or Keating as to the meaning of Nacotah; nor has he claimed to be an authority on the derivation of Indian names and what various writers say concerning them.

A. I find that under Featherstonehaugh's name, the name Nacotah appears.

3318 I find nothing else except Featherstonehaugh's name under "Nacotah."

I do not know what this list of references is, whether it refers to particular names, particular classes, tribes, or what.

Under Dacorta I find Lewis and Clark's Expedition.

Under Dacota, I find Long's Expedition, and under Dacotah, I find Howe, Historical Collection. Under Dahcotah I find Tanner's Narrative and Gallatin, Translation of American Antiquities and Parker's Minnesota Hand Book.

As to whether a conflict between Keating and Featherstonehaugh existed, would depend on whether they were talking about the same tribe of Indians. I would say that would

have to be taken into consideration. I am not sure whether Dacotah refers only to several divisions or not.

3319 Featherstonehaugh and Keating would have to refer to the same tribe of Indians by different names before there would be any conflict.

Q. In view of the investigation which you have made upon this subject of the alleged conflict between Featherstonehaugh and Keating with respect to the name of this tribe of Indians, and in view of what you have said in reference to the objection to Keating for carelessness, is it your opinion as a historical critic and expert, that your work in this criticism possesses that degree of carefulness which will justify our accepting your conclusion with reference to the carelessness of Keating?

Objection; question assumes claims on the part of the witness that witness has not made; he simply read into the record the statement of Featherstonehaugh, making no claim to have made any investigations upon that
3320 point himself, or to have drawn any conclusions as to which was correct; incompetent, irrelevant and immaterial.

COUNSEL FOR COMPLAINANT. I will add to that, in view of your failure to make an investigation, with respect to which was correct upon that subject, what have you to say?

Question reread as changed.

A. I simply cited Featherstonehaugh on this point as evidence that he thought Keating was careless.

3321 Every man's work must be tested in determining whether a writer is careless. An exhaustive investigation would of necessity take in an investigation of other authorities who had differed with him and an investigation of the actual facts themselves. My conclusion in so far as I drew one upon this point was based upon the investigation which I had made as I brought out in my direct testimony.

3322 Q. Do you think that with respect to this investigation of Keating's and as preparatory to the statement that Keating should be rejected for carelessness, you have made that thorough investigation into the facts themselves which justifies a historical critic in saying that an author of standing is careless?

A. I have pointed out four or five lines of evidence as indicating—

Q. No, no.

Mr. SCOTT. Go on with your answer, Mr. Lee.

A. (Continuing) —as indicating that—

Mr. WILKERSON. If the witness wishes to make a speech and not to answer the question, let him go on.

Mr. SCOTT. The witness is going on.

Mr. WILKERSON. And so long as he persists in going on and not answering the questions, we will sit here if it takes all summer, until he does answer the question. Go ahead.

A. I would like that question read and would like to know how far I had gotten along with my answer, if it was not responsive.

Q. The question is a very easy one and it is susceptible of a direct and terse answer. Read the question.

(Question read.)

Mr. WILKERSON. I submit that that question is capable of being answered yes or no.

3323 A. I have made such a study as would lead me to take his statements with caution and to try and square them with other facts.

Q. Do you think that you have made such an investigation into these statements from Keating as to warrant a careful historical critic in saying that a writer of standing is careless?

A. Possibly I could answer that better if I had my direct evidence before me or my notes.

Q. Are you unable to answer that question I put you last, yes or no?

A. I have made sufficient study to throw his statements open to question in my own mind and his carelessness would be one of the things that would lead me to make that conclusion.

Q. Do you still adhere to what you said in your conclusion with reference to the rejection of Keating for carelessness?

A. The rejection of Keating for carelessness?

Q. Yes.

A. Carelessness would be one of the reasons for rejecting Keating.

Q. Do you still say that Keating should be rejected?

A. In regard to the point at issue?

Q. Yes.

A. I would place very little weight upon him.

Q. Do you still say that Keating is to be rejected?

A. In the light of the fact that it is contrary to the facts

as I found them in other cases, I would place very little
3324 weight upon him.

Q. Do you still say that what you have read from Featherstonehaugh tends to show that Keating was careless?

A. That is one of the lines of evidence pointing out his carelessness.

Q. Do you still say that Keating is to be rejected?

Mr. SCOTT. I object, the witness has already answered the question.

Mr. WILKERSON. That is a direct and simple question.

A. I think I have answered that question.

Q. Do you still say that Keating is to be rejected?

A. All statements are to be taken and weighed and I would weigh his statements as I would weigh the statements of any other man.

Q. Pardon me, do I make my question clear?

A. Yes, sir, I think so.

Q. Do you say that Keating is to be rejected?

A. But that is a question that I believe cannot be answered by yes or no.

Q. Why did you say then that Keating is to be rejected?

A. I stated that Keating—that you are to place very little weight upon Keating's statements.

Q. Did you not say that Keating was to be rejected?

Mr. SCOTT. I object; the record itself will show what he has said.

3325 Mr. WILKERSON. Refer to the record and see whether you did not say that Keating was to be rejected. Did you not say at page 2991 of the record, and if you wish to do so you may read the record "Keating reports that the Desplaines could be navigated, but since he never was over the route and was a careless observer, his generalities based evidently upon Hopson's statements, must be rejected." Do you still adhere to that?

A. Well, I should think that that possibility should have been worded, that Keating was to be taken as evidence and weighed as you must weigh all evidence and base your conclusion upon that evidence. Now what Keating says must be squared with facts.

Q. Have you weighed Keating with the facts on these points concerning which you have pointed out the disputes between him and Featherstonehaugh?

A. I have weighed him and I rejected him upon this point at issue.

Q. Rejected him on the point in issue because you found he was contradicted by Schoolcraft and Featherstonehaugh?

A. That was one of the lines of evidence only.

Q. You still adhere to that?

A. Yes, sir.

As to whether I read into the record a statement from Featherstonehaugh's letter to the effect that Featherstonehaugh found Carver to be more accurate than Keating, I will say the record will show I am not sure that I have just the exact wording.

At transcript 2864 (Abst., p. 1165) Featherstonehaugh's letter on page 25 of Schoolcraft's book (reading): "I found Keating's account of the Mississippi river and especially of the St. Peter's most surprisingly erroneous, and old Jonathan Carver's book which he is constantly denouncing, very accurate," was put in to show that Featherstonehaugh found Keating inaccurate and Carver accurate.

3327 It connected another man who had traveled over that route and made the description and pointed out and showed that not only were Keating and Featherstonehaugh at variance but also Keating and Carver. There has been some question as to Carver's writings, in the early period he was accepted. His book was very popular and passed through many editions. Recent historians have questioned it and subjected it to analysis with the result that portions were
3328 rejected and portions accepted.

Q. As the result of your examination into this subject and the checking against data which you say the careful historian should do, it is your opinion that Featherstonehaugh's statement as to the comparative accuracy of Carver and Keating is a justifiable statement?

Objection. Featherstonehaugh's statement was limited to the accuracy of descriptions of specific things that he saw and of which Keating wrote and of which Carver wrote; no man who has not seen those things is competent to say which description is correct.

3329 A. On the whole and for the points that are involved, Carver should be accepted.

3330 To answer that question involves a knowledge of that particular territory as to whether Carver or Keating was correct.

This is a line of evidence that Featherstonehaugh thought

they were correct; to sufficiently verify and check that up
3331 I would have to know whether Carver was a careful
writer and narrator of things which he saw on the route
over which he traveled, and I would have to cite authorities as
to his accuracy to find out whether he actually went over that
road or not.

Q. Have you now as a historical critic any opinion as to
whether or not the statement upon which you have your finger
there in the record is a justifiable statement?

A. Well, Mr. Wilkerson, I am trying to evade—

Q. Have you any opinion on that?

Mr. SCOTT. I object to the witness being interrupted when
as far as he got in his answer is simply "Mr. Wilkerson."

Mr. WILKERSON. That is farther than he has got thus far.

Mr. SCOTT. He is not likely to get much farther when he
is interrupted on the first word of his answer.

A. Wouldn't that statement as to whether that was a justifi-
fiable statement or not involve a knowledge of that territory?

Mr. WILKERSON. I didn't ask you that; I asked you now
whether you had any opinion as a historical expert as to
whether or not that statement of Featherstonehaugh's was a
justifiable statement?

A. I could only base an answer upon this statement
3332 that Carver—

Q. Can you answer yes or no?

A. I don't think I can.

Q. Have you or have you not an opinion?

Mr. SCOTT. He has answered; he says he don't think he
can. There is your yes or no answer.

Mr. WILKERSON. Are you willing to adopt the answer sug-
gested by counsel for the defendant?

Mr. SCOTT. I object to that because I merely quoted the an-
swer the witness gave himself. I used his very words.

Mr. WILKERSON. I think it is important that the witness
should himself repeat the repetition.

Mr. SCOTT. He did use the very words I used. I quoted him
only.

Mr. WILKERSON. Why not leave it to him?

Mr. SCOTT. Because there isn't any occasion to heckle and
badger when a witness has answered, to keep pounding away
on a thing like that. It would not be permitted if a judge were
present.

Mr. WILKERSON. This witness has not been badgered. On
the contrary he has been subjected to a very mild cross-exam-

ination compared with what he would receive at the hands of a judge who was trying to ascertain the facts, and that the record will show.

3333 Mr. SCOTT. And that we will leave to the judge when the case is read to him.

Mr. WILKERSON. Have you now any opinion as to whether that statement is a justifiable statement?

Mr. SCOTT. I object, that the witness has already answered the question.

Mr. WILKERSON. Will you please answer it again?

A. I would refer to my record, by previous answer, Mr. Wilkerson.

Q. I am perfectly willing to let it stand.

Mr. SCOTT. I am.

The WITNESS. May I state further, Mr. Wilkerson—

Mr. WILKERSON. There is no question pending. Is this an addition now to the answer which you have already made through your counsel?

Mr. SCOTT. That, Mr. Wilkerson, you have no business to say and when you read the record you will know that you have no business to say it.

Mr. WILKERSON. I am perfectly willing to stand on the record with respect to that answer.

Mr. SCOTT. I am very much disappointed in you that you are.

Mr. WILKERSON. Perhaps the disappointments are mutual.

Were you about to add something to your answer?

3334 The WITNESS. In connection with my statement on transcript 2991 (Abst., p. 1205) "Keating reports that the Desplaines could be navigated but since he never was over the route and was a careless observer his generalities based evidently upon Hopson's statements must be rejected," I went through Keating's works to find out what information he had, if any, and what knowledge he had of the particular subject concerning which he was speaking. I think I went over both volumes of the expedition to St. Peters river to find what pertained to this subject.

3335 COUNSEL FOR COMPLAINANT. Q. Did you find the passage on page 215 of Volume II as follows:

"The navigable communication above mentioned is continued from the head of the Illinois by two different routes, viz., to Chicago fifty miles through the River Desplaines and a small water course connecting the stream just mentioned with Chicago river; and to the

St. Joseph of the Lake about one hundred and twenty miles through the Kankakee, and a small tributary of the St. Joseph interlocking with that river in a tract of marshy country. Through both of these routes loaded boats have passed from the lakes to the Illinois during the vernal floods. The route first mentioned is very direct, and is now frequently traversed with boats of burden; the other is extremely tortuous along the windings of the Kankakee, and is seldom practicable."

A. Merely from memory, I think I read that passage. I would have to see the reference. At any rate it should be taken into consideration "boats of burden" might be boats of large burden or small burden.

3337 Q. In reference to your statement that as to Keating's statement being based evidently upon what he was told by Hopson, I direct your attention to the sentence on page 167:

"Having been informed that this route was frequently traveled by traders and that it had been used by one of the officers in the garrison, who returned with provisions from St. Louis a few days before our arrival at the fort, we determined to ascend the Chicago river in order to observe this interesting division of waters."

A. In my criticism of Keating, I made no investigation for the purpose of ascertaining whether or not there were traders in Chicago at the time Keating was in Chicago other than his own excerpt gives.

My investigation put me in possession of no information as to whether or not there were traders at Chicago when Keating was there.

3338 There was very little trade that could have been in Chicago at that particular time, 1823. It would be about that period that Hubbard was doing his trading. Hubbard gives his own experience of the fur trade and describes brigades as coming down here in the years from 1816 to 1818 or 1824, something like that.

3339 Hubbard indicates that there were traders who at some time during that period were in Chicago.

Hopson's statement was the first thing that came into his mind evidently, for he cited Hopson. I do not know that his citation to Hubbard's experience or to the experience of traders so far as we can draw it from Hubbard would throw light upon or verify Keating's statement.

3340 It is not my impression that the first thing that came into his mind in this connection was the information he had received in regard to traders having gone this way. I would have to read that citation over.

3341 (Witness reads citation, from Hubbard p. 167, aloud.) This would be one of the things he would have in mind. "Having been informed that this route was frequently traveled by traders" appears before his reference to Lieutenant Hopson.

So far as I can find in the passages introduced, he does not say that he obtained the information with reference to the use of the route by traders from Lieutenant Hopson.

3342 He simply cites that as a specific instance that came to his mind. He says, "He accompanied us to the Desplaines" and tells that he had traveled it with ease in a boat loaded with lead and flour.

The passage, "Although at the time we visited it there was scarcely enough water to permit our pirogue to pass, we could not doubt that in the spring of the year the route must be a very eligible one. Lieutenant Hopson, who accompanied us to the Desplaines, told us that he had traveled it with ease, in a boat loaded with lead and flour," points to the season of the year he was referring to in connection with Hopson's instance. I do not presume that the Hopson trip is the same one to which he refers on the preceding page as the trip which was made by an army officer a few days before. He speaks of

Hopson making an entire portage. On page 167 he refers to an officer who had made a trip a few days before, which was a few days before the seventh of June when he left the fort.

The reference refers to three experiences and sources of information. I cannot cite any direct evidence that Keating ever talked with Schoolcraft.

3344 I made no particular investigation as to the time that Kinzie left Chicago. I know he was there, was an early trader and that during the War of 1812 he was not at Chicago, and that later he returned. Whether he was there in 1823 at that particular time I do not recall.

Q. As a result of your examination with reference to the use of this route, what is your understanding as to whether or not the early part of June was a period of high water or not?

Objection; incompetent, irrelevant and immaterial.

A. I am not sure whether June generally was. I thought the

spring freshet used to come a little earlier, yet I am not sure. We find high water at later times than June and evidently there must have been high water this year, when he was there. I say evidently. It is not positive proof. That is indicated by the fact that he made the portage himself.

3345 I don't remember that he says anything about the quantity of water in the river. If I am not mistaken he speaks about the quantity of water in the portage channel.

He says, "Although at the time we visited it there was scarcely enough water to permit our pirogues to pass," he was simply making a portage so there must have been water enough for him to make the passage over the portage with a boat. I did not state as positive proof that Keating's statement was based on Hopson's statement. That is one of the instances that he cites in particular.

His conclusion was that the Desplaines could be used clear up and across the portage, if that is what he means; I am not sure whether that is what he refers to on page 167 when he says "this route."

3346 He evidently had received information of this route; that this route, whatever he means by that, was frequently travelled by traders and that it had been used by one of the officers of the garrison. Whether or not he means that they made a short portage or a long portage is not clear from that excerpt.

3347 As I remember, I did not make a statement that I had considered the passage on page 215, Volume II, Keating, in my previous study of him. As the passage was read to me I thought I remembered having read it.

3348 Chapter 5 is headed: "General description of the country traversed by the expedition designed as a topographical report to the War Department, by S. H. Long, Major, United States Topographical Engineer." I am not sure whether there is anything in the preface to throw light on the authorship of that chapter not. It gives the sources of information from which the book was written.

I read from the preface that which seems to throw light upon that subject:

3349 "The principal object which the compiler had in view, was to unite the documents confided to him, so as to present a faithful description of the country over which the party travelled, and of the few adventures which in-

errupted the monotony of a journey through a wilderness.

It may be well to state, that the historical part of the narrative, together with the topographical and much of the descriptive matter, has been drawn from Major Long's notes. Mr. Calhoun's manuscripts, besides contributing to the same departments, and yielding the astronomical observations, have been very valuable in furnishing the greater part of the references to older writers. The comparisons between the observations made by our party and the assertions of former travellers, are almost entirely due to that gentleman. From Mr. Say's notes, all that relates to the zoology and botany of the country traversed has been obtained, as well as much of the matter relating to the Indians. This last department has been completed from the compiler's own notes, which have likewise furnished the geological observations. Besides which, the journals kept by each of the gentlemen have frequently completed the observations made by some other member of the party. It has been deemed unnecessary to state, in all cases, by whom the observations were made or recorded. This
3350 has, however, been done whenever the facts appeared sufficiently interesting to require that the names of the observers should be annexed to them.

As Major Long's report to the War Department presents a concise summary of the general features of the country visited by the party, it has been thought advisable to introduce it as a conclusion to the narrative. Having been ordered to the Ohio to make an experiment to improve its navigation, according to the provisions of a late act of Congress, Major Long was absent from Philadelphia during the preparation of that part of the manuscript which follows the three first chapters of the first volume. This may account for some of the inaccuracies which the work will be found to contain; it is hoped that by his presence they would have been avoided."

3351 This is a report by S. H. Long, I judge by the reading of the chapter and was published by Keating as a part of this book. I think Major Long was in this general territory.

On the question of whether Long was in Chicago when Keating was there, the passage on page 146, Vol. I, Keating throws light on the subject. (Reading):

"After a while we reached a high and dry prairie, partly covered with young aspen bushes, rising from the height of from eight to ten feet, and so thick that it was almost impossible to keep the whole of the party in sight; this reminded Major Long of some of the difficulties he had experienced in travelling through the cane brakes of Arkansaw."

3352 I presume that was just a short time before they reached Chicago. Long was evidently with them in the spring journey that just preceded, reaching Chicago. I understand he was in command of the expedition. I read from Chapter 5, pages 201 to 202:

3353 "The region, whose description is intended in the present essay, as embracing the route of the expedition, is limited on the N. W. by the intersection of the 51st degree of N. latitude with the 97th of W. longitude, and, on the S. E. by that of the 40th degree of latitude with the 74th degree of longitude west of Greenwich. Its figure is rhomboidal, about thirteen hundred miles long, from E. S. E. to W. N. W. and has an average width of between four and five hundred miles. Its boundaries may be traced on the accompanying map, being coincident with the route of the Expedition.

The researches of the Expedition were more immediately limited to the region above specified, but our attention has been nevertheless directed to the attainment of new information relative to other parts of the country, whenever a favorable opportunity presented. The substance of the whole is briefly embodied in the following remarks, with the view of giving a geographical outline as complete and satisfactory as circumstances will permit.

In order to render the description as plain and perspicuous as practicable, we shall arrange our remarks under separate heads, corresponding to particular divisions of the route of the Expedition, and conclude with a few observations of a more general nature and application. The following division of the subject may therefore be regarded as applicable, viz:

1st. Of the country between Philadelphia and the Ohio River.

2nd. Of the country between the Ohio River and
3354 Lake Michigan.

3rd. Of the country and navigable communications between Lake Michigan and the Mississippi.

4th. Of St. Peter's River and the adjacent country. Also of the Coteau des Prairies.

5th. Of the Red River and the adjacent country.

6th. Of the country between Lakes Winnepeck and Superior.

7th. Remarks on the variety of subjects connected with the topography of the country."

The third subdivision is "Of the country and navigable communications between Lake Michigan and the Mississippi river." (Reading):

3355 "No part of the region traversed by the Expedition can be considered more interesting than that now under consideration. The surface, which is generally prairie, is agreeably diversified by gentle swells and valleys, and checkered with skirts of woodland fringing its numerous water-courses. The soil in many places is exuberant in a high degree, and is nowhere infested with rocks or stones. The bottom especially exhibit proofs of the greatest fecundity, in the rankness of their vegetable products; to these valuable traits must be added the abundance of lead ore, which prevails in many places; all of which conspires to render this country quite as valuable as any other tract of equal extent within the basin of the Mississippi. In this brief recital of the natural advantages and resources of the country, it should not be forgotten, that the facilities for water communications between the lake and the Mississippi are numerous; there being no less than three different routes through which loaded canoes have passed from one to the other in time of inundation, without the intervention of portages.

The foregoing remarks are intended as applicable more particularly to the tract bounded, north by the Wisconsin and Fox Rivers, south by the Illinois, east by Lake Michigan, and west by the Mississippi River, than which few countries of equal extent can boast of a finer aspect. The rivers included within the limits just assigned, are the Chicago, Milwaukee, Manitowacke, and several other of less note, tributary to Lake Michigan, the Des Plaines, De Page, Fox, Mequin, &c. tributary to the Illinois, the Rock and Makabea or Small Fox

River, and several others of smaller size that mingle their waters with the Mississippi. Rock River has many tributaries, among which are the Kishwake, Pektannon, Little Pektannon, and Wassemon Rivers, all respectable streams, never before recognized in the geography of the country. The valleys of the water-courses generally, and particularly those just mentioned, are bounded by parallel ranges of hills, of moderate height and gentle declivity."

The WITNESS (continuing reading page 209):

"The country embracing the southern extremity of Lake Michigan, and extending inland many miles from the lake, presents no hills except the elevated sand-drifts that bound that extremity of the lake. On the contrary, an extensive flat embracing woodlands and meadows alternating with each other, spreads from the St. Joseph to the Des Plaines, and from the lake to the Kankakee. Its soil is apparently good, but the chilling northerly winds, which blow from the lake, charged with vapour, seem to carry with them blast and mildew, and render its prolific energies abortive. At Chicago, which is situate within this tract, attempts have been made to cultivate maize, wheat, oats and other products, but they have often proved fruitless."

3357 The WITNESS (continuing reading pages 212 to 213):

"The Valley of the Upper Mississippi, below the Falls of St. Anthony, varies from three to ten or twelve miles in width, except at the De Moyer and Rock Island rapids, where its breadth is so contracted that it affords sufficient room only for the bed of the river, which at the former place is about 1200 yards wide, and at the later from 800 to 1000. It is uniformly bounded by high bluffs, which are generally abrupt, and often precipitous. Within the valley, especially in the vicinity of Lake Pepin, insulated knobs and hills of considerable magnitude, based upon horizontal strata of rocks, and towering to various heights, from 100 to 500 feet, are frequently to be met with. These must be regarded as the remains of the high country, through which the river in process of time has scooped out its broad and deep valley. They serve not only to beautify the landscape, but to remind the traveler of the great changes wrought upon the surface of the globe by the agency of water.

3358 The upper Mississippi is also remarkable for the great width of its bed, and the multiplicity of islands it embosoms. It spreads in many places to the width of five or six miles, and seems to lose itself among countless islands through which it flows in numberless small channels. Between the mouth of the Missouri and Lake Pepin, no less than six hundred and forty islands of considerable size have been enumerated. Lake Pepin is a very beautiful enlargement of the river, twenty-two miles long and from one to three broad, destitute of islands, and affording a great depth of water. Above the lake the river becomes narrower, and the islands smaller and less numerous.

The valley country is made up of prairies and woodlands alternating with each other; the former of which are usually elevated above the reach of floods, and are richly carpeted with herbage and flowers, while the latter sustain a dense and heavy growth of trees, intermixed with vines and shrubbery and are, for the most part, subject to inundation in flood time.

3359 During the spring floods, which usually prevail during the month of April, May and June, this part of the Mississippi is navigable to the mouth of the St. Peter for boats of great burden. In a low stage of water the rapids above mentioned oppose serious obstructions to the navigation, which is also rendered still more precarious by the numerous shoals and bars with which the bed of the river is infested. The rapidity of the current decreases as we ascend, being about three miles per hour at the mouth of the Illinois, and one mile and a half near that of the St. Peter. At the DeMoyen rapids, the river is hurried down a descent of about thirty feet in the distance of eleven miles, and at the rapids of Rock Island, which are about fifteen miles long, the aggregate descent is about forty-five feet."

Motion to strike out. Not cross-examination or pertinent to the direct.

COUNSEL FOR COMPLAINANT. The Government preserves the right of not having it further copied in the record should the court sustain the motion to strike, but to offer it in its own behalf in case it should elect so to do.

The WITNESS (continuing): I now read the paragraph at the bottom of page 214 and top of page 215. (Reading):

"The Illinois river is to be ranked among the most

important of the western rivers, inasmuch as it affords greater facilities as a water communication between the lakes and the Mississippi than any other stream. Its length from its mouth to its source, at the junction of the Kankakee and Des Plaines, is three hundred miles. For a distance of fifty miles on the upper part of the river shoals abound, which are serious impediments to its navigation in a low stage of water. The most formidable obstructions of this nature are the rapids situated at the confluence of Vermilion river, which are utterly impassable for boats except in times of flood. Below this, the navigation is exceedingly easy, for boats of moderate draft and burden, to the mouth of the river, a distance of two hundred and fifty miles. The current throughout the distance last mentioned is exceedingly gentle, often quite imperceptible; indeed, this part of the river may with much propriety be denominated an extended pool of stagnant water. Its valley is broad and bounded by parallel ranges of bluffs, presenting, in most places along the margin of the river, low bottoms covered with a dense growth of timber trees, surmounting thickets of weeds, vines, and bushes almost impenetrable. The woodlands thus situated are subject to inundations, during the prevalence of a moderate freshet, but in their rear, at a considerable distance from the river, are extensive prairies of a rolling aspect and richly adorned with herbage. The ascent to the highlands across the bluffs, is generally gradual, but in some instances abrupt."

The next paragraph is one relating to the Desplaines which I have head into the record.

I now read from the paragraph following that, page 215. (Reading):

3361 "The Wisconsin, from its magnitude and importance, deserves a high rank among the tributaries of the Mississippi. When swollen by a freshet it affords an easy navigation for boats of considerable burden through a distance of more than one hundred and eighty miles. Its current is rapid, and, like the Mississippi, it embosoms innumerable islands. In a low stage of water its navigation is obstructed by numerous shoals and sand-banks. At the distance from its mouth above mentioned, there is a portage of one mile and a half, across a flat level, which is occasionally subject to inundation,

to a branch of Fox River of Green Bay, thus affording another navigable communication between the lakes and the Mississippi through which boats have been known to pass. The valley of the Wisconsin is somewhat narrower than those of most other rivers of this region, but in other respects it is very similar to them. The high country here assumes a more hilly and broken aspect, and the soil becomes more sandy and meager.

While on the subject of water communications it is proper to remark, that a third route, viz: by way of the Rock and Milwaukee Rivers, has been found practicable for canoes."

3362 My attention being directed to the statements at pages 209 and 210 in the paragraph beginning "The country embracing the southern extremity of Lake Michigan," etc., and ending, "at Chicago which is situated within this tract attempts have been made to cultivate maize, wheat, oats, and other products, but they have often proved fruitless." Upon reading this I thought of Keating's statement, and that they were probably taken from the same set of notes. According to my knowledge of the fact it would be inaccurate. I have not gone into it in detail as to whether they did actually attempt to cultivate in the early days or with what success.

3363 Have made no study of the cultivation of maize in northern Illinois in the early part of the nineteenth century. From my general knowledge there must have been a very slight attempt made to cultivate maize of any kind, because of the paucity of the population, and there were no indications of commerce going out of this territory; there is no indication of people being here to any extent, I mean.

Have made no investigation of the relation that may exist between maize and corn as it is now cultivated, or the meaning that might have been given to the word "maize" there.

3364 I would not be prepared to say that the statement in chapter 5, page 210 just read, is incorrect or not.

I think my statement on Transcript 2292 (Abst., p. 962) "Hutchins is also considered and he in turn based his statement on Kennedy" should be changed to read, that he probably based his statements on Kennedy. There is not positive proof that he did so base them.

3365 In my conclusion of Hutchins, I said:

"That I find no definite evidence that he was ever in Chicago or that he has been over the route in question.

On the other hand, when he describes the Illinois country, he speaks of the Illinois river and cites as authority, Kennedy, concerning whom we know that when he attempted to make a journey up the Illinois river, he failed because of insufficient water. Hutchins, then, by inference, it seems reasonable, is citing as authority a man who is not competent to speak on the subject in question."

I did not aim to convey the idea that there was positive proof he did. As far as any knowledge I have of the De la Plaines, the inference is that it is based upon Kennedy and his experience.

3366 There is nothing in the edition which I have in my hand which refers to Kennedy as the authority for the statement I have mentioned. My notes say that in the preface of Hutchins he recognizes Kennedy or bases his work upon Kennedy. I have not the volume here which I used.

I am not familiar with Hicks' edition of Thomas Hutchins' *A Topographical Description*, at reprint from the edition of 1778, edited by Frederick Charles Hicks, published at Cleveland by Burrows Brothers Company in 1904. I have

3367 information as to the standing of Hicks as a historical writer or critic. Do not know how many editions of this description were issued by Hutchins. I presume there have been more than one. Unless I could make a comparison, I could not tell from looking at the preface to the Hicks Edition whether or not it is an accurate reproduction of the preface to the edition I used.

3368 I have before me *A Topographical Description of Virginia* by Hutchins which states that it is "a plan of the rapids of the Ohio, a plan of the several villages of the Illinois country, a table of the distances between Fort Pitt and the mouth of the Ohio; and an appendix containing Mr. Patrick Kennedy's Journal up the Illinois river and a correct list of the different nations and tribes of Indians with the number of fighting men, etc."

I would not say that that extract from the title page is all that can be found for the statement that Hutchins has referred to Kennedy as authority for his statement concerning the Illinois river and passages to Lake Michigan. My notes indicate that I found something else. I presume I have.

3369 I did not say I have positive proof that Hutchins bases his conclusions on Kennedy.

Thomas Hutchins had a residence here in Illinois and was a trader for a period. Just what he was I am not sure. I know he was here and lived in Illinois and left notes and citations upon what then existed in Illinois.

3370 I should judge he came to Illinois about 1770 or 1771.

Do not know when he first came here. I now recall that Hutchins was an officer in the British army who, in 1766, in company with Captain Gordon, Chief Engineer of the Western Department of North America, and George Grogan, Deputy Indian Agent, went on an expedition down the Ohio.

I might have recalled this from his map and the topographical study that he left. You have refreshed my recollection.

From memory I think I know that in 1776 Hutchins was at the present site of Louisville, Kentucky, and that in 3371 that year, they ascended the Mississippi to Fort Chartres, Illinois, the present cite of St. Louis. I am not sure that I recall that from November, 1768, to October, 1770, Hutchins' base of operations was Fort Chartres. I think I have read the statement, "From November, 1768, to October, 1770, Hutchins' base of operations was at Fort Chartres in the Illinois country" which appears in the biographical sketch of Hutchins in the book to which I have been referred.

I am not sure that I have.

3372 I knew that in 1771 Hutchins presented to the American Philosophical Society at Philadelphia an account of the Illinois country. There is a work entitled "Remarks on the country of Illinois" in the Pennsylvania Library. I have not examined it.

I presume that Hutchins at Fort Chartres would have an opportunity to come in contact with what trade there was in this western country that centered at St. Louis.

In my investigation as to the sources of Hutchins' information I recall the statement you have read as follows:

"I have compared my own observations and surveys, respecting the lakes, with those made by Captain Brehm, of the 60th regiment of foot, (who was for many years employed as an engineer in North America), and I 3373 find that they correspond with more exactness than surveys usually do, which are made by different persons at different times; and I am happy in this opportunity of expressing my obligations to this gentleman, for the cheerfulness with which he furnished me with his surveys and remarks."

Other than as given there, I do not know who Captain Brehm was, and have made no independent investigation to determine the character of his observations.

Kennedy's trip was in 1773. He says, "July 23, 1773, we set out from Kaskaskia in search of a copper mine." He speaks on August 10th, of the conditions along the Illinois river. The last date I find of his journey is August 16th.

3374 It was in July and August that he was on the Illinois river. On August 10th, he says:

"We crossed the highland and at ten o'clock we came to the Fox river which was thirty miles beyond the place where we left our boat."

I think Schoolcraft made the trip to which I referred in my direct testimony in August.

3375 Q. In your investigation of this account of Kennedy, did you obtain any information as to how much water the boat used by Kennedy drew?

Objection. Witness testified to this on direct; already in evidence how much water Schoolcraft's boat drew.

A. I find nothing in regard to that from this present search other than it says (page 507), "To row our boat". It does not say what kind of a boat.

I understand that is not the paging of the original publication.

On the date of August 9th, I find this statement:

"After passing this river, which is 255 miles from the Mississippi, we found the water very shallow and it was with difficulty we got forward, though we employed seven oars, and our boat drew only three feet of water."

3376 Under the same date, I find this statement:

"The water being very low we could get no further with our boat, and therefore we proceeded by land to the forks."

3377 Under date August 10th, I find this statement:

"From whence we went to an island where several French traders were encamped."

That indicates there were several French traders encamped on that island.

Under date of August 12, I notice this statement:

"Here it is that the French settlers cut their mill stones."

Under date of August 10th, he says:

"About six o'clock we arrived after walking about 12

miles at an old encampment fifteen miles from the fork."

3378 I presume he refers to the fork of the Fox river.

Under date of August 9th, he says:

"At the distance of a mile further we arrived at the little rocks which are sixty miles from the forks and 270 miles from the Mississippi."

From this first glance, I judge he means the forks of the Vermilion there.

My attention being called to said statement:

"The wind continuing fair, about ten o'clock we passed the Vermilion river, 267 miles from the Mississippi. It is 30 yards wide, but so rocky as not to be navigable. At the distance of a mile further, we arrived at the little rocks, which are 60 miles from the forks, and 270 miles from the Mississippi."

It would not be the forks of the Vermilion. I presume it would refer to the Desplaines and Kankakee.

3379 I believe the boat was left sixty miles from the forks on August 12th. I am not sure what he means when he says, "Here it is that the French settlers cut their mill stones," because he says just before that "At nine o'clock we arrived at our boat." Evidently he had come from the island back to his boat. "From the island where we found the French settlers and from whence we embarked in a canoe to go to our boat, there is a considerable descent and rapid all the way." Evidently, he had been up the river, returned to where he left his boat and then embarked in a canoe.

3380 He speaks of French settlers. I do not know whether he means they had cut the mill stones before or were then cutting. Either interpretation might be put on that expression.

I have used the term "early settlers" in my testimony. In speaking of the early settlers of northern Illinois I was referring to the present English settlement, and that there were no settlers previous to their coming in, as was pointed out by that line of evidence.

3381 Under date of August 12th, my attention is called to this statement:

"We embarked early, and proceeded three miles down the Illinois river. On the northwestern side of this river is a coal mine, that extends for half a mile along the middle of bank of the river, which is high. On the

eastern side, about half a mile from it, and about the same distance below the coal mine, are two salt ponds 100 yards in circumference and several feet in depth; the water is stagnant, and of a yellowish color; but the French and natives make good salt from it."

Which would indicate that the French settlers were there at that time.

My attention is called to a statement under date of August 15th:

"Here I met with Mr. Janiste, a French gentleman, and prevailed on him to accompany me in an attempt up this river to discover the copper mine."

Other than as given here, I have no information as to who Janiste was.

3382 Q. Do you know whether or not he was a trader?

Objection. Witness has stated his only information appears in the excerpt.

A. No.

I recall no other reference to Janiste at the present time.

Q. Did you ever make any investigation for the purpose of determining whether or not Kennedy ever met Hutchins or had the opportunity of meeting Hutchins after he, Kennedy, made his journey in 1773?

Objection. Immaterial.

A. I do not recall any passage now that connects the two after that period.

I made no investigation to determine who Kennedy was.

3383 I read this narrative of Kennedy's and I have come across his name before, but I can make no positive statement about him. I have taken his narrative of his journey up the Illinois river. To obtain information as to who he was and in what he was engaged during this period, I would go to the Illinois Historical Collection. I think that is where I came in connection with his name. Then I would trace up what information I found there through further sources. I do not know what authorities I would resort to, what particular volumes.

3384 I think I remember having found his name in the connection. Do not know that I knew that Hutchins was transferred to the Southern Department in 1772, and until 1777 was engaged in engineering work in West Florida.

My attention is called to the statement on page 19, Hickman Edition of Hutchins, which reads:

"Early in 1772, at General Haldimand's request, Hutchins was transferred to the Southern Department. Until the year 1777, he was prominently identified with all the important engineering work in West Florida."

Q. Do you recall whether or not you came in contact with that fact in your investigation?

Objection; immaterial.

A. I am not sure whether I have or not.

Q. In the course of this critical study in the relation between Hutchins and Kennedy, did you ascertain it to be a fact that during the period of 1772 to 1777 Kennedy was at Kaskaskia?

3385 Objection. Question assumes that the witness testified and made a critical study of relations between Kennedy and Hutchins, whereas no such thing appears in his evidence.

3386 A. My conclusion, if you call it a conclusion, was that Hutchins probably based his work on Kennedy.

Q. Yes, and I am investigating to determine whether you were justified or not in using the word "probably."

Objection; irrelevant, incompetent and immaterial.

A. The conclusion which I read was that Hutchins then by inference, it seems reasonable, is citing as authority a man who was not competent to speak on the subject in controversy. The statement that Kennedy was not competent I base on his narrative of his particular journey up the river.

3387 Unless a historical critic would limit his statement in some such way as I have, based upon the study which he has made, I do not think he would be justified in stating that Kennedy was not competent to speak upon the subject from a mere examination of Kennedy's narrative without investigating the other sources of information that Kennedy might have.

To make an exhaustive study, you would have to go into the question of where Kennedy was from 1772 to 1777 and what he was doing, as far as possible. Maybe he made other journeys up there. In my study I have not found any record of his making a journey up there.

3388 My previous testimony shows how exhaustive a study I made; what conclusions I drew and how I have limited them.

Q. I understand that you have no knowledge at all of the

subject of where Kennedy was during the five years commencing in 1772, whether or not he was in Kaskaskia at that time?

Objection; subject fully covered by questions and answers heretofore given.

3389 A. My previous answers stand as to that.

If in the course of my investigation into this subject I had ascertained that Hutchins was in Louisville in 1766 through the southern Illinois country including Kaskaskia, Cohokia, and at Fort Chartres during the period of 1766 to 1770, and that he had written on the Illinois country as early as 1771; that Kennedy during the period of 1772 to 1777 was continuously in Kaskaskia and that both Hutchins and Kennedy had the opportunity resulting from the general experience of coming in contact with those who lived and 3390 traded in that part of the country, I might change my conclusion if I found those additional facts. I would weigh all those facts in the consideration of the question. I have limited my conclusions to the study I have made. The facts that I had at hand. If I found new facts, I would weigh those.

3391 Some of those facts I have taken in consideration in this connection.

I knew that Hutchins had been in Illinois, at Louisville and along the Ohio river. I think I recall that information. I

knew that he must have had some general knowledge 3392 of the situation in Illinois; but in considering this question of the navigability of the Desplaines river, it seems to me that this ought to be taken into consideration, that whether or not the Desplaines was navigable was merely a matter of the length of the portage. Now, if he came in touch with the people in lower Illinois, he might have come in contact with traders who came by the general route of Chicago, but he cites as authority a man who attempted to go up this route and was unable to use the Desplaines.

Mr. WILKERSON. You still persist in your statement do you that Hutchins cites as an authority—

The WITNESS. No, I have not made that statement.

Q. You just made it.

A. Well, I should modify that, which is, however, not a modification of my original statement. I said it was by inference it seemed reasonable, based upon Kennedy, that is, it

seems, a reasonable inference that he bases his statement upon Kennedy.

3393 At the time I drew my original conclusions about Hutchins, as I stated them, I do not know that I knew all of the facts you point out in regard to Kennedy.

I do not quite know what you have in mind when you say, "assuming these facts to be true." You say assuming he had an opportunity to get in touch with traders. I would want to know from study whether he had met traders who were actually using this route or not, and what his information from those traders was. If I got information of that kind I would consider it and it might lead me to change my conclusions. I would consider all the facts.

3394 My original conclusion appearing in the record at 2992 (Abst., 1205), had been copied on a typewriter from a first draft, written out in my handwriting and was read into the record from this prepared typewritten statement.

3395 I have not seen Hutchins' map. (Witness shown copy of Hutchins' map, which accompanies Hicks' Edition of Thomas Hutchins. A Topographical Description.)

I believe Kennedy got up the river as far as thirty miles below the Fox.

3396 I see the word "Islands" here, and I remember Kennedy referred to an island. Also, I see on the map the river Plein, Mount Joliet, Lake Du Page, Theakiki river, the Chicago Indian Village, and the little rivers which I judge is the Chicago river.

I said that there was an inference that Hutchins based his remarks upon the Illinois river upon Kennedy.

Q. Can there be any reasonable inference on the part of a historical critic that Hutchins based his portion of his map above the islands on the information which he obtained from Kennedy when Kennedy only got to the island?

3397 Objection. No evidence that the witness drew any inference that Hutchins based his opinion on which he made this map upon anything from Kennedy. The matter referred to as to which he did draw his inference has no relation to what appears on this map.

A. I do not know what his source of information for this map would be.

3398 So far as I have made a study of him I should not think there should be any inference of that kind at all.

I did not intend that it should be understood from my testimony that the only information which Hutchins had with reference to the Desplaines river and these portages was probably that which he had obtained from Kennedy. I limited my conclusions solely to my examination, and so far as they extended they indicated that Hutchins by inference based a statement in regard to the navigability of the Desplaines or upper Illinois on Kennedy and may have had other sources of information. He had a general knowledge of Illinois.

It says on the map it was published according to Act of Parliament, November 1, 1778, by Thomas Hutchins, the same year the Topographical Description was published.

Hutchins must have had a knowledge of Illinois which he got from different sources. In regard to the map and the possible inference that since the map and topographical description were published in the same year, Hutchins did have some information with reference to the Desplaines river and these portages, I would have to go into the study of that map and find out whether Hutchins got his information from authentic sources, whether he actually made those surveys for the map himself, and whether it was reliable. Whether he got it from authentic sources would have nothing to do with whether he got it from Kennedy. I have said by inference Hutchins is probably based on Kennedy.

There is an inference in view of what appears on Hutchins' map accompanying this topographical report that Kennedy is one of Hutchins' sources of information about that part of the river above the island. In the mind of the historical critic I do not think there is any inference that Kennedy was one of the sources of Hutchins' information as to the names and description of the rivers above the island, especially in regard to the name that would apply.

At Transcript 2990 (Abst., 1205) I placed Kennedy in the second class referred to there, namely, those who passed over the route but did not use the Desplaines and stated that, "I considered him in this connection also since he had tried to come to the head waters of the Illinois and was unable to do so." I do not know that Kennedy ever passed over the Desplaines route.

My attention is directed to Volume 2, Long's Expedition by Keating, page 218 (reading):

"The most formidable obstructions of this nature are the rapids situated at the confluence of the Vermillion river which are utterly impassable for boats except in times of flood."

(Witness handed book of Imlay, containing Kennedy's account). I do not understand that any inference could be drawn with reference to what was above the rapids from the fact that Kennedy was unable to get over them. "The water being very low we could get no further with our boat and therefore we proceeded by land to the ford." He does not say it was mere passage over the rapids at mouth of Vermillion. From that point on he says "the water being very low we could get no further with our boats."

3404 Schoolcraft was obliged to leave the river just above the Vermillion. He says (reading):

"The rapids commenced half a mile above, which makes it evident that the Illinois is greatly diminished in size above the junction of the Vermillion. The water at once becomes shallow, and the rock which is a sandstone, presents itself first in broken masses, and soon after flooring the bed of the river. When our canoe would no longer float without rubbing against the rocks, we got out and made a short portage, the empty canoe being still guided along by men walking in the stream on each side."

In the Kennedy account under date August 12, I find the statement:

3405 "From the island where we found the French traders and from whence we embarked in a canoe to go to Fort Pitt, there is a considerable descent and rapid all the way."

It seems that each of these extracts point out that from that point up the water was shallow and it was not navigable.

3406 I would have to make an examination of Kennedy again to find out just how far he did go up the river. He proceeded with boats to within sixty miles of the forks. As to whether I had the right to put Kennedy in the class of travellers who passed over the route but did not use the Desplaines, I considered my classification of him and tried to make it clear that I placed him in that class because he tried to use the water and was unable to do so. I do not know that

he tried to use the Desplaines and brought that qualification in the classification.

Hutchins would be regarded as a general primary source. There is a difference in primary sources.

In giving weight to the statement of a man who had an opportunity for general knowledge and who had made the statement that there was a portage of four miles between the Chicago and Desplaines, and that that was a trade route, and who had had an opportunity extending over a period of from three to four years to come in contact with persons who used the route, I would take those latter facts into consideration, but I would not give him more weight than I would the words of a man who was actually making the route and telling of his experiences.

The greater the opportunity to gain knowledge, the greater weight I would place upon it. As to whether I would place more weight upon the statement of a man getting information for a map than upon one who was not getting information for that purpose would depend wholly upon the relative position and training of the man.

The fact that a man was getting information to publish a map would have to be taken into consideration. If he held an official position, gathered information from most reliable sources, I would place more weight on his work than that of a man without opportunity of investigation who was not making a study of the topography of the country.

I read from Imlay's *America*, page 45:

"Charlevoix seems to have gone rapidly from Detroit by water the greatest part of the way to New Orleans; Hutchins to have done nearly the same from Pittsburg, down the Ohio to the Mississippi, and up that river to the Illinois; so up that, and from thence to Detroit. He has given a tolerably good account of the Illinois country."

That would seem to indicate that Hutchins had gone up the Illinois river, I would make no generalization with regard to the map. Do not remember having seen that passage before. It might be a fair inference for a historical critic to draw from that that what Hutchins said and put on his map was the result of his own observation; he would probably take it into consideration in drawing his map. When it says that a traveler goes up the river it indicates he went up the river, clearly. I believe Hutchins' book was published in 1778. I believe that edition of Imlay was

published in 1797. My attention is directed to my statement on transcript page 299² (Abst., 1206), that Imlay based his statements on Hutchins.

3413 From the introduction to the third edition of Imlay, it appears that Imlay's letter was written ten or fifteen years after Hutchins wrote, or in 1785; Hutchins having written in 1778. Imlay was a general writer of Kentucky history; was an army captain; his standing generally good among historical writers. In letter page 45, it is said (reading):

"His observations I have been told are considerably accurate, and as I have not had the advantage of traveling this route, I recommend you to read his book, which was originally published in England, and no doubt is still to be had."

Imlay lived in Kentucky a number of years; I think, 3415 Louisville. He would have an opportunity to know concerning the general statements which Hutchins might make of Illinois, by contact with those who would have knowledge on the subject. I assume that he would not know as much of the conditions along the Illinois or Mississippi as he would along the Ohio; that would not be far from Kaskaskia.

3416 I have before me the passage from Perrault offered on the part of the Government. Transcript, page 185 (Abst., 79) wherein it is stated that in 1783 there were Canadians traders in Cahokia. It speaks of a number of gentlemen from Montreal who had stores there, and mentions Perrault having come down.

3417 This would indicate that there were traders on the Illinois that went from the north. Imlay refers to Hutchins on page 45, and says: "I must now beg you will travel with Hutchins from hence to Detroit." "He will conduct you by the head branches of this river, and after a short passage you will embark again on Lake Michigan, etc." From that I judge it to be a reasonable conclusion that he is 3418 turning the writer over to Hutchins. The reason being that he has been told that Hutchins is generally accurate and since Imlay has not had the advantage of traveling the route he recommends reading Hutchins' book originally published in England which can still be had. It is probably a fair inference that he referred the writer to Hutchins because people had told him Hutchins' account was accurate. He had the

means of coming in contact with people who would know about the Hutchins account in a general way.

3419 My attention is directed to the passage from Volume 1, Keating, Long's Expedition, page 166, transcript page 2893 (Abst., 1173), which refers to the volume of business in Chicago, and "as a place of business it affords no inducement to the settler." I simply cited that as one of the lines of evidence upon which I drew my conclusion that there was very little commerce in Chicago.

3420 I would not have accepted it if I could not find corroboration any more than I would have accepted his statements about the Desplaines river without corroboration. His statements would have to be verified, especially in view of the criticism I have made. I do not change my general conclusion with regard to Keating. At transcript, page 2992, I class Darby among the men who probably were never at Chicago and state, "Darby came only to Detroit and he is considered in this connection. * * * It is to be noted that the three, Woodruff, Darby and the editorial should be given very little weight in deciding the question at issue."

3421 I made no exhaustive study of Darby. He was a member of the New York Historical Society. I find no evidence that he was in Chicago; that he only came to Detroit I took from the book which says, "A Tour from the City of New York to Detroit." He may have been in Louisiana and in going have gone down the Ohio.

Made no inquiry to find out his relations with Benton.

3423 He may have been in St. Louis and known Major Long. I believe Darby was a surveyor. I don't know how he came in touch with the editorial from the St. Louis Enquirer. It may have been handed to him by Benton or he may have been a subscriber. Some man had been down the Ohio and who was in St. Louis and Indiana might be given considerable weight and some might not.

3424 I made no exhaustive study to find if Darby had gone farther west than to Detroit. I made no study except from this book. If later investigation proved that my investigation as far as it went had not revealed all the facts that he was in Chicago, that he did pass over this route, my statement that he should be given little weight would—

3425 The statement in the preface that "In West Virginia, in West Pennsylvania, in Kentucky, Ohio, Indiana, Illinois, Tennessee, Missouri, Mississippi, Louisiana, and Ala-

bama, in west New York, Michigan, and in Canada, I have, for thirty-five years, been a witness to a change of a wilderness to a cultivated garden" would indicate that he had traveled widely.

There is nothing in the statement of Hutchins, Long, or the second volume of Keating which says that boats of burden frequently pass from Lake Michigan by way of the Desplaines river, to change my conclusion in regard to the statement, in this editorial about these "hundreds, nay, thousands of boats."

3426 It ought to be taken into consideration that for a certain portion of the year at least the river would be frozen up and impossible for boats to pass down there. The reasonable interpretation of the editorial would make his statements therein apply to the time of which he was writing.

3427 I have found no evidence to cause me to put the interpretation on that passage that hundreds of boats had been seen at St. Louis or had used the Desplaines river. I considered the words, "Have been seen." This "long contested problem" about which Darby was writing is that of natural water communication between the St. Lawrence and Mississippi. This editorial states, that it decides a long contested question. Without weighing that editorial with other editorials and information that he might have gotten in hand.

3428 It says: "The following interesting notice decides it." If there were other sources of information, he would probably have given weight to them, instead of citing the editorial as the one thing that decided the problem. In squaring that editorial with the facts (See Transcript, 2905, Abst., 1178), I tested it by the facts or with those conditions which I thought to be facts, the commerce in northern Illinois on the lakes, and at Chicago and the population in Chicago and northern Illinois.

3429 I tested it where I thought a safer test could be made. By the word "safe" I had in mind that by getting to the conditions in these places I could find out whether or not the commerce did pass over this route or there was a probability that it did so pass. Had I gone to St. Louis and noted commercial conditions there I must have differentiated between the commerce that came on the various routes that centered there.

To consider the possible fact that there was not civilized

population in northern Illinois and that there might have been further to the south people who were carrying on trade and commerce through this district where no trade originated itself. I would have to take into consideration along with that the trade that was on the lakes and the trade that came through Chicago.

Have cited authorities pointing out the extent of commerce at Chicago and on lakes about that period.

When I squared this editorial I took into consideration Perrault's own experience in drawing my conclusions, and, I think, what he said about the gentlemen from Montreal and Cahokia and in considering the interests of the gentlemen from Montreal in southern Illinois.

3431 I realized there were several routes by which people could come from the north to southern Illinois and St. Louis and placed the test as to whether they passed through Chicago as the commerce through Chicago. I think the authorities I have cited will point out whether the commerce came to Chicago or not, and if they did pass through 3432 Chicago, and whether they were unloaded.

As to whether my authorities deal with the extent of trade in Chicago, I would refer to my direct testimony to find out. Whereupon, counsel for the Government asked the following question:

Q. Haven't you in mind pretty clearly your process of reasoning on that? You may refer to your authorities if you want to, but I had assumed that you had your process of reasoning pretty clearly in mind I want to find out just what it is. We have now these known facts with which we are trying to square this statement, and a part of the known facts are as you say that throughout southern Illinois and up in the neighborhood of St. Louis, there were these towns from which trade and commerce was being carried on; and in this very period we find the gentlemen who live in Canada, Montreal, do business in southern Illinois, we found this route by way of the Illinois and Desplaines being referred to as the direct route, and we find these brigades of boats coming down from Mackinaw each season; now is it your idea that there is any test at all of whether commerce passed through this route, that there was no commerce which really originated in Chicago because there were no people there?

To which the witness replied:

My statements in the direct will point out that I simply considered that as one of the lines of evidence.

3433 If there were no population, it would indicate there could be no commerce arising from the demands of the people there.

3434 We have evidence that this route was used in that period. Hubbard says he used it; Perrault passed through Chicago in 1783; and Heward in 1790.

I considered all those matters in my direct; that there were no people in Chicago and no commerce originating there would not disprove the fact that the route was used.

3435 The French and the men Kennedy referred to would be people that settled in Kaskaskia and Cahokia, but they were traders, and might be classed as settlers. Both the traders and the settlers who came with their horses and oxen would use the early river routes. The early French traders were compelled to use every waterway that they could and to carry his canoe if he were a settler or on a mission.

In the case of the settlers they would settle along the rivers. I have not made an exhaustive study of the early French settlers of the southern part of the state.

3436 Indians and negroes at a later period came in with the people from Kentucky and south of the Ohio. The French traders came, some direct from France, but primarily from Canada, I believe.

There were French settlers who married these Indians, and by accepting the life made their trade more successful. There was a lower class and an aristocrat class. The French carried on some agricultural work; sent products down to St. Louis and New Orleans, especially during time of American Revolution. I presume, they maintained their financial connections with Montreal.

In squaring the statement of this editorial with known facts, I have not overlooked conditions in southern Illinois during the period immediately preceding the time it was written, in 1819, and the trade and commerce carried on by the people who lived in southern Illinois and St. Louis.

3438 I interpret the editorial as applying primarily to the period of which he was writing. If you interpret it as speaking of conditions running back as early as 1673, my impression was that further investigation would show there was little commerce over that route at that time.

3439 On Transcript, page 2710, (Abst., 1108) I stated that in my investigation of the histories, I found no evidence of the use of the Desplaines by early settlers either in bring-

ing themselves or families or for transportation or produce and supplies.

3440 I think I could still adhere to that. The only use of the river for transportation was by these three, Heward, Perrault and Hubbard, for the purpose of transportation, portage and supplies. They would not be included as early settlers. Think it would be a strained use of the word
3441 to class Perrault as a settler. He was a trader and made one trip.

The early inhabitants of Cahokia and Kaskaskia who had business relations with the gentlemen who lived in Montreal might not be so classed, but I have not found a record of their using the Desplaines. The three men evidently used this route in connection with trade carried on with people living in lower Illinois. In the case of two of these men I have pointed out there is no record that they used the Desplaines. In the case
of Hubbard it is clear he attempted to use it. He gives
3442 the detail of one trip down the Desplaines and speaks in a general way of conditions upon other trips.

Deschamps is the man who as I recall it is the man who had charge of the Illinois Brigade before Hubbard. It is of record in connection with Deschamps' works that Hubbard gives us the narrative.

3443 It is not my point that if the early settler merely had his goods or merchandise shipped back and forth over the river in connection with his business, that he did not use the river. My question was whether I had found "any evidence of the use of the Desplaines by early settlers either in bringing in themselves or their families or for the purpose of transportation or portages or supplies." If you speak of traders to the south as settlers and transportation which Hubbard carried down over the river as being transportation of those early settlers, there would be then one line of evidence which I have found. I am not sure I had that in mind when I answered the question. I had in mind the settlers that would come and settle along the river and use it as they did down along the Illinois or Ohio and Mississippi rivers.

3444 If a man collected furs at Kaskaskia and Cahokia or St. Louis and shipped them by this route over the Desplaines to Lake Michigan and from thence to Canada it might be interpreted that he had used the river for the purpose of transporting goods, produce or supplies; that is not

the usual interpretation that would be placed on settlers using a river for commercial purposes.

If the Desplaines was navigable for a boat carrying one thing it would be navigable for another, and I have taken the experience of Hubbard on the river into consideration.

3445 On transcript, page 2991 (Abst., 1205), I state that Tousey and Graham and Phillips report positively against the navigability of the Desplaines.

3446 I refer to the passage, "During half of the year the Desplaines does not contain water enough to float a boat, so could not become useful at a national highway." That was taken from Graham and Phillips' report.

I am taking his statement of the condition as reporting against navigability. He says: "Could not become useful as a national highway." I use the word, "navigability."

3447 He does not state that the Desplaines might be navigable during half the year. The mere inference might be drawn as to that.

In connection with the foregoing statement, I considered the remarks at the close of the report, that the route by the Chicago, "presents at one season of the year uninterrupted water communication for boats of six or eight tons burden between the Mississippi and Michigan Lake; at another season a portage of two miles; at another a portage of seven miles from the bend of the Plein to the arm of the lake; at another a portage of fifty miles." Regarded that as stating conditions as probably existed at the time of freshet.

During the period of the year when boats of six or eight tons burden could be taken uninterruptedly to the Mississippi, I presume it and the prairie around it at that time would be navigable.

When the water was not quite so high it would probably be used with the short portage; at the season when there was a portage of seven miles that portion of the river below the portage would be navigable for boats of six or eight tons burden. In the sense that successful commerce could be carried on regularly, I should think that Graham and Phillips reported positively against navigability.

As to my use of the word navigable in my general conclusion I think I took into consideration the fact as to whether the river was used or not and noted the kind of vessel, canoe or pirogue that was used.

3449 I tried to make my conclusions and statements of fact as they existed, how many times in the whole pe-

riod the river was used, with what means of transportation, whether canoe, pirogue or batteaux.

Where I say on Transcript 2964 (Abst., 1197), referring to Hubbard's trips "that they went down the Desplaines is to be admitted; that they navigated it is not," had in mind Hubbard's detailed account of the down trip wherein they put the boats on rollers. I would not consider that navigation.

3450 His experience in going down the river was that he resumed the voyage to the Isle a la Cache where he unloaded to pass the shoal. Hubbard points out that progress was slow from that point; that they carried the goods the most of the way from the Illinois on their backs, and that he was compelled to place boats on poles.

3451 If that be navigation, though I do not consider it, then Hubbard navigated the Desplaines. I presume Hubbard did navigate the Desplaines in places, but as it took him three weeks to go down the Desplaines he evidently did not navigate very much.

3452 Q. All your testimony and the whole effect that your testimony has in this case, depends upon what you mean by "navigation" and "navigability" is not that right?

Objection; incompetent, irrelevant and immaterial. If that conclusion is to be drawn it is to be drawn from the record not by the witness.

A. Am not sure what the whole effect would be. Have pointed out a number of facts; analyzed a number of excerpts and placed them in the record.

The river might be navigable and still be obstructed by shoals or shallow places at low stage of the water.

3454 In my statement on Transcript 2991, (Abst., 1205) wherein I say "Long probably reported in the spring of the year concluding that the river be navigable for small boats and flat boats must be improved," I had in mind the third paragraph of the report, which begins as follows "The river through the above mentioned distance has four or five short rapids or ripples that make their appearance only in times of low water; in every other part it has the appearance of being a chain of stagnant pools and small lakes affording sufficient depth of water for boats of moderate draught."

3455 I also considered the next paragraph, "The distance from the river Desplaines to Chicago river by this water route is about nine miles, through the greater part of which

there is more or less water so that the portage is seldom more than three miles in the dryest season, but in the wet season boats pass and repass with facility between the two rivers." Having in mind alone the sentence, "About four or five short ripples make their appearance only in times of low water" the inference would be that those ripples would not be so noticeable in times other than low water. From the context as a whole I do not know that the inference could be made that excepting times of low water, the river even at those places could be used by the kind of boats referred to by Long in his report.

3456 Where Long speaks of rendering the Desplaines and Illinois navigable for small boats and flats requiring but a small draught of water, I presume he had in mind this improvement he indicates, making the river navigable for such boats at all seasons of the year, probably. He says to render the Desplaines and Illinois navigable for small boats and flats requiring but a small draught of water requires this improvement.

3457 Long's report was dated March 4, 1817. From the date, I judge that Long probably reported in the spring; that is based on the date of the report, March 4, 1817. All that I had in mind when I said that Long reported in 3458 the spring was this date. The statement as to the ripples shows that Long was evidently reporting conditions of the river at different stages of water.

I based my conclusion on the entire report of the Canal Commissioners of 1825, including the sentence, "From the mouth of the Little Vermilion above referred to, neither the Illinois nor the Desplaines is navigable in low stages 3459 of water, as they are frequently interrupted by rapids," which is to be taken into consideration in connection with the succeeding statement that they turn their attention from that to the building of another navigable water communication between the Illinois and Lake Michigan. They refer there to the head of navigable waters of the Illinois river, which indicates that they placed the head of navigation on the Illinois river.

3460 I presume they had in mind the building of a canal that could be used for commercial purposes at all times of the year and at all stages of water. They had in mind that the head of navigation was on the Illinois, and that to construct navigable communication between that point and Lake Michigan it was necessary to make improvement.

I presume when they had in mind the head of navigation they meant the navigation at all seasons, and all stages of water. As to the head of navigation at other stages than low water, my first answer covers that.

3461 I am not sure just what they refer to as the "Head of navigation." Two or three points on the Illinois are known as the head of navigation; one, Peoria, another Peru, and sometimes vessels would come farther, as far as they could at different times of the year. Steamboats had been introduced on western waters in 1825 and on the Ohio; there had been some down to St. Louis by that time and one or two on the lower Illinois.

Q. In those newspaper advertisements which you read into the record was not the head of navigation, which is there specifically mentioned the head of steamboat navigation?

Objection; great many read into the record; one answer cannot meet all.

3462 A. It does not state what it is that is meant by the head of navigation.

It is simply referred to as such. I think in some of those advertisements it says, head of steamboat navigation. I am not sure. The Canal Commissionuers probably had in mind that the head of steamboat navigation was on the Illinois river, though it does not specifically state so. My conclusion that the Canal Commission of 1825 reports that the river was not navigable, does not necessarily involve an understanding of the meaning of the word "navigable," in the report, and what I understand by navigable. I stated that they reported against navigability and I cited their authority as evidence.

3463 My interpretation of their remark about the head of navigation on the Illinois has been interpreted in my direct.

Whereupon the witness read as directed by counsel for complainant from the Commissioner's Report of 1825:

"A portion of the commissioners, therefore, in the fall of 1823, accompanied by Col. Justus Post, whom they had engaged as their engineer, explored and examined the country from the rapids of the Illinois river with the streams emptying into the same, to Lake Michigan; and the country bordering on the Chicago river and Kalimick, which streams also empty into Lake Michigan.

3464 The commissioners returned by water in canoes, examining the bed of the rivers, particularly the depth of

water, and the height of the river banks. They also ascended the Chicago river, or arm of Lake Michigan, having its confluence with that lake on the west side, about 35 miles below the head of it, to the head of the river, 5 miles. From this point there is a portage of 7 miles to the river Desplaines. They then descended the Desplaines, 50 or 60 miles, to its mouth; where uniting with the Kan-ka-kee, a considerable river from the southeast, its source being in the country with those of the Wabash and Saint Joseph, the river Illinois is formed; thence down this river to its confluence with the Mississippi, 350 miles; thence down the latter, 18 miles, to Alton, the place from whence they had departed.

It is a source of much satisfaction for the Commissioners to be enabled to state, that the result of this examination eventuated in the conviction, that from the mouth of the Illinois river, to the Little Vermilion, a handsome stream 12 or 15 feet wide, discharging its waters into the Illinois river on the west side, and about 4 miles below the rapids of the Illinois, there is not the least obstruction to the navigation, excepting in two or three places below Spoon river, in extremely low stages of water, where small sandbars show themselves, but which, however, can be easily removed."

3465 They evidently were in canoes and in the fall of the year, returned in canoes.

My interpretation of the second paragraph is that as a result of the trip they make a distinction; they specifically speak of the conditions below the head of the Illinois river.

Further they speak of the conviction they come to, they point out that from the mouth of the Illinois to the Little Vermilion there is not the least obstruction to navigation, except in two or three places, and then they speak of the conditions above the river and following that description point out that the navigable waters are on the Illinois. Those are the facts I have taken in consideration in my conclusion.

3466 It says, "From the mouth of the Little Vermilion above referred to neither the Illinois nor the Desplaines is navigable in low stages of water" and then they point out that no serious obstacles present themselves in effecting a canal navigation by another water.

It says, "They are not navigable in low stages of water, as

they are frequently interrupted by rapids." I am not sure whether or not in the interpretation of Long's report, I had in mind the description of the Desplaines as given in Volume two of Keating's report, which I have read into the record heretofore.

Keating's knowledge of the stream at that time was drawn from it at the time of high water.

3467 Do not believe I had in mind the comparison which is drawn in Chapter 5, Volume 2 of Keating between the Desplaines and Chicago and the Fox-Wisconsin.

3468 When I formulated my conclusion I do not recall whether or not I had in mind the report of the Select Committee of the House of Representatives appearing on transcript, pages 305, 306 and 307 (Abst., 140-141), in connection with my interpretation of Long's report, Graham & Phillips' report, and that of the Canal Commissioners of 1825.

Said report of the Select Committee of Congress was thereupon read to the witness as follows:

"Such, indeed, is the concurrence of scientific observation and actual experience in relation to that fact, that, in order to establish it, the report was not necessary. The experience to which the Committee refers, is that of many years, and which is matter of historical notoriety. It is that of repeated passages having been made, by uninterrupted navigation from the river into the lake. With respect to the scientific observations that have been made, the Committee refer to the report of Major Long to the Secretary of War, in 1817, and which was printed by order of Congress."

3469 The WITNESS (continuing): I simply made a study of the report. I do not recall the particular language of the Committee, which you have just read to me.

Don't think I read that part of the report. I notice that the report has not been made.

3470 "Although the report of the State Commissioners and Engineers had not been made to the General Assembly at the time of adopting the memorial that has been referred to the Committee." I should take this into consideration in regard to the three reports of Long, Graham & Phillips and the Canal Commissioners of 1825, as I would all lines of evidence. Here they quote from Long's report, which I could get by reading the report itself. The fact that two committees of Congress in their formal report referred to a fact as a historical notoriety should be considered. The question

you refer to here of historical notoriety is that of repeated passages having been made by uninterrupted navigation from the river to the lake; which should indicate that the fact that you are calling my attention to there would be facts that happened evidently in high water.

3471 If they passed over the portage in their canoes it seems a fair interpretation to put it positively high water.

At transcript 2987 (Abst., 1204), I say Cass used this route early in July, 1827, with a light canoe; he had twelve men at the paddles and a steersman.

I have read the passages in Smith, Life and Times of Louis Cass, to which you have directed my attention, which have been read as follows, page 185:

3472 "At that time, the communication between Green Bay and Prairie du Chien, upon the Mississippi river, where these events were passing, was by water up the Fox river about two hundred miles to the portage, thence across to the Wisconsin and down that stream to the Mississippi, which it enters three or four miles below Prairie du Chien. General Cass embarked in a brick canoe with fifteen paddles to visit the scene of difficulty, and to take such measures for the protection of the people and for restraining the Indians as might be found necessary."

(Page 188): "From St. Louis, General Cass ascended the Illinois in his canoe and passed into Lake Michigan, by the water communication, without leaving it."

(Page 188): "At the head of the Desplaines, a branch of the Illinois which approaches near Chicago, is a shallow lake, appropriately named Mud Lake. The party entered it towards evening, and it soon became so dark that they could not discern the bank. The lake was covered with the broad leaves of a kind of lily, favorable haunts of disgusting looking water snakes. A birch canoe cannot touch the shore without danger of having a hole broken through its slight material. It is brought near the land, and there retained while the passengers disembark, and this is effected by their being carried ashore upon the backs of the voyageurs. And 3473 in the same manner is the freight disposed of. The canoe is then taken from the water and carried by the men upon the land. Finding they could not get to shore

safely, the party spent the night upon that slimy sheet of water. Eighteen men in a small canoe, on a hot summer night, with the poles stuck into the mud across the canoe to steady it, accompanied with the most intense rain and with the most intense thunder and lightning,—such are the reminiscences which belong to that memorable night. And he who was not there, or has never been in such a place, if such another place there is, has little conception of what a formidable enemy a mosquito can be. During that long night,—long in suffering, though short in the calendar, for it was in the month of July,—their venomous attacks were beyond the power of description. As soon as the dawn of day enabled the party to discern the surrounding objects, the anchor poles were taken from the mud, and the voyage was resumed. A small branch of the Chicago creek takes its rise close to this Mud lake, and the whole region being flat and marshy, when the waters are high this creek flows back into the lake, and thus a communication was formed by which boats passed from the Desplaines, which runs through the lake, to the Chicago creek, and of course to Lake Michigan. This channel of communication, though almost shut up by the rank water vegetation, was found in the morning, and the travelers entered it, and as the descent to Lake Michigan is rapid, and the distance but a few miles, that space was soon passed over, and the canoe rested upon the broad bosom of that great lake. The magnificent city which occupies the junction of the Chicago creek and the lake, and of miles around, had then no existence. The white man was not there with the power and the desire to change everything around him. There were no troops, and but few families, and these were connected with the Indian trade. They were of course exposed at all times to the sudden hostility of the Indians. As the canoe approached their cabins at the mouth of the creek, the voyageurs commenced their songs, and these were heard by the traders and at first mistaken for the shouts of the Indians. Knowing that the times were dangerous, they were at first in great fear, being entirely destitute of means of resistance, but they were soon and happily reassured by the sight of our flag and by the arrival of the canoe, and it was with demonstrations of the liveliest joy that they received General Cass upon the bank.”

This account says there were eighteen men. Hubbard's narrative of Cass, says twelve men and one steersman; don't know that I adopted Hubbard rather than this. Simply gave analysis of Cass' account as related by Hubbard.

3475 I pointed out the facts in that connection; did not draw any conclusion or make any adoption as to the number of men in one or in the other. I rejected the statement in Hubbard as to the date of Cass' trip, and accepted the date as here given when corroborated. Took this as one line of evidence to point out it was earlier than September 28, which I believe Hubbard gives it. I would take it as one line of evidence indicating there were more than twelve men in the boat, in connection with the facts, analyze each book and point out how methodic they were.

Have not reached any positive conclusion as to the number of men in the boat.

3476 The date is pretty well fixed in my mind as July, 1827.

I find three or four other statements to corroborate that, which appear in my direct testimony. I cited Young and McLaughlin and one or two other citations from the Wisconsin Historical Collection, one by a man who was appointed by Cass on the trip at Prairie du Chien.

My attention is directed to the line of evidence on Transcript page 2847 (Abst., 1159), the particular question by defendant's counsel beginning, "If it should appear that in these various county histories."

3478 Most of the county histories began at an early period and ran down to a late period.

I put in passages about hauling goods by wagon and about stage lines connecting with steam boats at the head of steam boat navigation on the Illinois.

I do not recall any affirmative statement that at that time the Desplaines was not used by boats of the same kind that were used on rivers like the Illinois and the Fox-Wisconsin prior to the introduction of steam boat navigation in the west.

3479 I read over the two translations of Charlevoix, to which I have referred. Where I find they differ I went to the original and found out in what respect; don't know as I made a careful study to find out whether one might be called a free translation and the other a literal translation.

3480 I did not state my conclusions in regard to that in my direct evidence.

At transcript page 2990 (Abst., 1205) I stated "Charlevoix, in September, 1721, fully intended to use the route of the Desplaines, but because the river was a mere brook at that place, took another route, even though he was in a canoe." He stated another reason also.

I have put Charlevoix in the second class of these writers, namely, those who passed over the route but did not use the Desplaines; he passed over the same general route, but did not pass down the Desplaines.

3481 In putting him in that class I had in mind the general weight that I would give to his evidence. This classification is subject to the criticism that he did not pass down the Desplaines, but since he made particular inquiry in regard to it and is forced to take another route, I put him in that same general class as men who would speak of that general condition.

3482 His statement that the river was a mere brook is probably not entitled to the weight which should be given the statement of an observer who had passed over the route and been unable to use it, but he made particular inquiry in regard to that, fully intended to use it, and because of information procured he turned and went the other route.

The basis of my general classification was to separate those who had had the opportunity to personally observe, so what they said was what came under their own eyes and those that did not, but taking that general classification, it is open to this criticism, that it did not actually pass over that particular route.

3483 As a historical expert, I don't think that one reading my classification would give greater weight to Charlevoix's characterization of the Desplaines as a mere brook than he should give to it; wouldn't put it that way; you would give greater weight perhaps to him than you would to Darby or Keating. And it was with this idea that I separated the men in making this classification. I think Charlevoix is entitled to greater weight than Keating, because he intended to use the route and made inquiry upon that particular point, and found a condition which he recorded. Therefore, would give him greater weight than one making statements I cannot check up.

3484 I checked it up simply from inquiry on that particular point. Charlevoix cites no authority for his statement that the river was but a brook, etc., simply leaves us the rec-

ord of his experience and points out why he took one route and why he didn't take the other.

Q. Among historical critics is it your opinion that the statement of Charlevoix which does not show upon what it is based, is entitled to greater weight than the statement of Keating, which does show upon what it is based, other things being equal?

A. If I checked up Charlevoix and found that Charlevoix's facts were not correct, or if I found out that he was a
3485 careful observer, and had not narrated things correctly, I would give them different weight.

Mr. WILKERSON. Motion to strike out answer as not responsive.

3486 If Keating makes a definite statement and cites Hopson as authority, I would give that weight; and I presume I would give it greater weight than a man who cited no authority on general principles. In this particular case it seems a fair interpretation that Charlevoix was inquiring or was informed after investigating in regard to these sources, and he was giving information upon this particular point after inquiry.

3487 I have not gone to Charlevoix and checked him up as carefully as I have some other men. I submitted the translation and the original for the work of the linguist to decide whether those translations were correct.

In view of the known facts and data that I have in mind, I think the characterization of the Desplaines as a mere book is appropriate.

He states that he found this river was a mere brook when he was there; does not say whether it was low water, or not; he says it was in September, 1721.

3488 Referring to my classification of the different authorities which have been referred to in this case, first, those who used the route; second, those who passed over the route, but did not use the Desplaines; third, men who were in Chicago, but did not pass over the route; and four, men who were probably never in Chicago, and other secondary sources, as to where I would now put Charlevoix, I would say that if you mean the question as to the weight I would put on him, I believe I would leave him in the class where I did.

COUNSEL FOR GOVERNMENT. No. I am talking about your classification.

A. Well, it would be incorrect as I have stated to conclude

that Charlevoix passed down along the Desplaines river, but he passed over this general route.

As to which one of the classes, one, two, three or four, he properly belongs, adhering to that classification from that standpoint, and not considering the weight of the evidence, I would say, the classification as I have made it on page 2987 shows the principal idea that I had in mind, or one of the ideas that I had in mind. I have divided the authorities 3489 into four classes according to their value as evidence, and then I made a general classification, after that; and these four classifications would be open to the technical criticism that counsel has pointed out.

As to where I would put Charlevoix, I would say I believe I would leave him, so far as his value as to evidence is concerned, where he is. That is to say, so far as its value as evidence is concerned, I would put Charlevoix down as one who passed over the route, but did not use the Desplaines. I said in my answer, I think so far as the value as evidence is concerned, I would put him right where I did; but so far as the technical question as to whether he passed over the route is concerned, he did not.

Q. Omitting the reference there to the value as evidence, and taking the four classes as you have divided them, first, those who actually used the Desplaines, second, those who passed over the route, third, those who were in Chicago but did not pass over the route, and fourth, the men who probably were never at Chicago and other secondary sources; where do you put him?

A. I think my answer will bring out that point, too. 3490 My direct evidence points out whether he passed over the route and my answer just previous to this points out whether he passed over the route.

Q. I want to be perfectly fair about it, Mr. Lee, because I am going to insist on an answer to this question. First, the four classes of witnesses, those who actually did pass over the Desplaines.

A. Well, he did not actually pass over the Desplaines.

Q. To which one of these classes does he belong if he does not belong to the second class?

Mr. SCOTT. I object because the witness has fully stated in answer to the same question exactly where he puts him.

A. I think I have, Mr. Wilkerson.

Mr. WILKERSON. Q. Does he belong in the second class?

Mr. SCOTT. I make the same objection.

A. Judging from the standard I used, judging as to the value of the evidence—

MR. WILKERSON. Of course if you want to dodge the question, all right.

MR. SCOTT. I object to the counsel's unwarranted remark, it being a mere trifling examination where the witness has answered over and over again, and I shall turn on you when

I take up Mr. Thwaites as to what he said about Charle-3491 voix being over this route.

MR. WILKERSON. In view of what counsel has said as the the trifling examination I will state in the record that Charlevoix was obviously put in the second class, a class of witnesses which the witness has stated is entitled to greater weight than other classes of witnesses, in order that one reading this statement might infer that the weight to be given to Charlevoix's testimony is the weight which would be given to someone who had passed over this route.

MR. SCOTT. Which of course it is clear from the context that he never did, and if it is so, it is a matter for counsel to argue. If that clearly appears what is the use of this examination? It makes it appear that counsel does not believe it clearly appears or he would not go further with the examination.

MR. WILKERSON. I shall have to judge as to how trifling the examination is.

Q. In connection with this classification, Mr. Lee, you say you have divided the authorities into four classes according to their value as evidence. Now, was it your intention to convey the meaning that the evidence of those who were put in the first class had greater value because they had used the Desplaines?

A. Yes, I think that was my purpose. That those 3492 who passed over the route had greater value than those who were in Chicago, but did not pass over it. My statement in the direct points out why I thought the various authorities should have greater weight, that is, the men who passed over the route and used the Desplaines.

The reason for making the classification was to furnish a standard by which the value of the evidence could be determined. There were one or two exceptions that I pointed out in my evidence. The case of Kennedy—that while I put him in that class, it was open to criticism.

Judging from the weight of the evidence, I think it clear why I put Charlevoix where I did.

3493 Charlevoix was in Chicago I guess. Don't know as I would class him as a secondary source in regard to the point in question.

Referring to my analysis of Hubbard, transcript page 2964 (Abst., 1197) and my statement on transcript page 2986 (Abst., 1204) "Hubbard gives details of but one trip; states the time as October, 1818, and relates that he carried goods most of the way and put boats onto poles,"—I presumed they used the river whenever they could on the down trip, or on the river all the time excepting when they were on poles. My attention is directed to the following statement from Hubbard:

"It took us three consecutive days of such toil to pass all our boats through this miserable lake; when we finally camped on the bank of the river, our goods had all crossed the portage and we were more ready to proceed. Our boats being again loaded, we resumed our voyage down the Desplaines until we reached Isle La Cache, where low water compelled us to again unload our goods in order to pass our boats over the shoal that here presented itself; and again we camped after a hard day's labor.

Our progress from this point was very slow indeed, and most of the distance to the Illinois river our goods were carried on our backs."

They carried their goods on their backs; I think that that is from Isle La Cache down.

I remember reading the statement on page 41 about Mr. Sara, a trader who when on his way with loaded canoes from Montreal to St. Louis with goods for the Indian trade on the river, camped at this point.

3495 I didn't go into Sara very carefully, and didn't use that in my direct evidence. I don't know whether that is a reliable account of the Sara incident, or not. That would be a statement by Hubbard of the conditions that existed at the time of Sara, who was a trader from Montreal. It would be a suggestion I would follow up and test to see whether it would be correct or not. Not having gone into it I cannot state my opinion concerning it. At transcript page 2986 (Abst., 1204) I stated "Hubbard gives details of but one trip."

3496 I recall Hubbard's statement, pages 59 and 60, about sailing up the Desplaines from Cache Island through Mud Lake, to the South Branch.

Q. Wouldn't you say there were some details given of that return trip?

Objection; passage speaks for itself.

A. He does not give as much detail as he does in the other account; points out that their progress was slow; and does not tell what their experience was.

There is sufficient detail to point out that they passed up the Desplaines river and through Mud Lake and to the south branch, regardless of the channel.

3497 As to whether there is anything given on page 74 of Hubbard to indicate whether or not Deschamps made this trip during the year Hubbard was not with him, would say I would judge Deschamps came with his brigade to the Illinois river. There is nothing there given as to whether he used the Desplaines river or whether he did not.

The second trip of Hubbard, referred to on page 104, "the water was unusually low this season," was in the fall of 1821; the same year that Schoolcraft came up in August, when his experience was that the water was so low that he could cross without wetting the soles of his feet.

My attention is directed to my statement on transcript page 2964 (Abst., 1197), relating to the account of the third trip referred to in Hubbard, page 124, my statement being, "No account is given of the second trip, while concerning the third trip he writes that because the Desplaines would not even at spring time carry his heavily loaded boat, he was compelled to make an extra trip."

I based that statement on the following (reading):

3498 "The season had been an unusually good one, and we had accumulated more furs and peltries than our boats could carry up the Desplaines river, and I was accordingly dispatched with four boat loads to Chicago; these I stored with Mr. John Crafts, and returned to the 'brigade' when we all moved forward on our annual return to Mackinaw."

Because of the heavily loaded boats which he could not carry on the Desplaines, he was compelled to make an extra trip. (Reading):

"A portion of our furs were shipped from Chicago, for the first time, in a small schooner which had brought supplies for the garrison."

I don't think that that means that they could not only not carry them on the Desplaines but that they could not carry them on Lake Michigan, and had to ship them on a schooner.

The exact statement is "we had accumulated more furs and peltries than our boats would carry by the Desplaines river."

3499 My attention is directed to the statement in Cooley's "Lakes and Gulf Waterway," 1891, as follows:

"The navigable waters of the Desplaines as reserved for public use by the original land survey made in 1821 approach at Summit within seven miles of the waters of Lake Michigan, the south branch of the Chicago river at Bridgeport."

I am not sure that I had read that or had it in mind when I was putting in my passages from Cooley, and making my deductions.

3500 I read from Lakes and Gulf Waterway, 1888, by Cooley.

The statement from Tousey I had in mind when I said on transcript page 2991 (Abst., 1205) that he had reported positively against the navigability of the Desplaines, is as follows (reading):

3501 "For many years I had felt a most anxious desire to see the country between Chicago and the Illinois river, where it has generally been, ignorantly, supposed that only a small sum would be wanting to open communication between them."

I don't recall that Tousey makes a definite affirmative statement that the Desplaines river could not be used by boats of any kind. An inference that might be drawn from Tousey's account might be that he had in mind a communication between Lake Michigan and the Illinois river which could be used by larger boats than those generally used on those rivers at that time, which is what he means by his exalted notion of the enterprise.

3502 He does not state so. I presume he had in mind the commerce of the river at that time, and possibly the commerce of a future time.

Counsel states that at transcript page 2995 (Abst., 1206) I was asked as to my opinion as to whether or not the Desplaines was in its natural condition navigable for purposes of useful commerce and that I answered that it was not. There is an implied meaning that I had some idea as to the natural condition of the river, that it was in an unimproved state; that I had some idea as to what constituted navigability as designated by "navigable for purposes of useful commerce;" and necessarily implied that I had some idea as to what was

meant by useful commerce. To answer that question I would not have to draw any conclusion other than that the natural condition of the river would be in its unimproved condition.

3503 Don't think you can well separate those two ideas, as to navigability and navigability for purposes of useful commerce.

This would be navigable for the purposes of useful commerce. It might be navigable for a hundred and one other things, or possibly not so many, but for some other things. I have navigability in this sense, navigability for the purposes of useful commerce.

3504 To reach a conclusion would have in mind the navigability for purposes of useful commerce, and none other than is expressed in those words.

It floating logs down a river were for purposes of useful commerce, I suppose that would be navigability.

A river might be navigable and still have rapids.

3505 I have pointed out the lines of evidence and basis on which I drew my conclusions, and pointed out where it has been used for commerce and where for other purposes.

It might be navigable for purposes of useful commerce or navigable, I presume, for light canoes, or for the particular thing that was going down it. If there was water there, a canoe, or the bark, or the pirogue, whatever it was that was used, it would be navigable for those particular things that were going down it. By useful commerce I have in mind anything that a merchant would use and carry on regularly

3506 for commercial purposes; furs would probably be useful commerce.

I suppose I would call the fur trade and supplies for the Indians, such as was carried on between Canada and the territory along the Ohio river useful commerce. To that extent, I presume I must necessarily draw a distinction between useful commerce and what would not be commerce at all; one must make a distinction of some kind in using terms.

Q. Wouldn't your answer depend necessarily upon what the examiner meant by navigability, and whether or not in asking the question he had in mind the same definition that you had?

Objection; immaterial and irrelevant; the generalization would not and could not depend at all upon what the examiner had in mind.

3507 A. I don't know that it would.

The answer would depend, possibly, on what I had in mind; I had a general idea of being navigable for purposes of useful commerce. In order that my conclusion could be understood, it is not essential necessarily that I and the examiner understand the same thing by the term "useful commerce." My conclusion was based upon what I conceived useful commerce to be.

3508 Have indicated the extent to which my researches have revealed the use of the Desplaines. In some cases for trade and in some only for canoe trips, and one in search for the deserters of the army; I believe in the case of Furman. I have simply indicated definite cases which I enumerated in my direct examination, wherein it appears that it was used in two or three cases for commerce, and in other cases for light canoes. I found that it was used for the transportation of persons and property in the cases I have cited and as I have cited.

3509 I stated the size of boats that were used and whether it was a canoe or pirogue. Whether the boats used were in common use at the time the transportation occurred, would involve a knowledge of the common use. I suppose canoes were used by people, whether on the Desplaines or some other river. I have cited as near as I can the evidence as to the size and kind of the boats used on the Desplaines. I presume the canoes used throughout this part of the country at the time were of the same general kind, and likewise the boats they attempted to use, but they might have been of different sizes. I am not sure that I know what size boats Hubbard used.

3510 Presume they were the boats that were used by the fur traders back and forth. Do not recall whether it stated they carried three tons. My direct evidence states all I have on that point.

3511 On transcript page 2986 and following (Abst., 1204), I point out the information I could get in regard to the size of the boats that were used on the Desplaines. I take Hubbard first.

3512 He says "boats" but nothing in regard to the size of the boats, that I could find.

I recall the statement in Graham and Phillips that boats of 6 or 8 tons made the passage over the portage to the Des-

plaines; as I remember the reference you give now, they passed over without making a portage.

3513 I recall the statement in Volume II of Keating, that boats of burden ~~frequently used the~~ route.

3514 The early settlers of the south and west of Chicago, within a radius of 50 or 60 miles generally speaking came from the north; the Middle States, New York and New England in distinction from the source of the population from the south.

3515 As to whether they were farmers, or not, I have not taken up that point in detail. Some of them brought wagons and oxen and horses with them; others came by the lake route. I don't think I reached any conclusion as to how the people came in.

3516 Referring to my first conclusion, on transcript page 2996 (Abst., 1207) it would necessarily convey the idea that the writer had some idea of the meaning of navigable in the sense. I don't see that any of the reasons for my conclusions proceed upon the theory that although the river had been once used did not continue to be used when the character of the settlements changed. It is simply a question that during the period of settlement, if it had been navigable it would have been used by those early settler when they came in, and it would have been used after they came in.

3517 In my second conclusion, in the latter part where I used the word navigability, an idea would be in the mind of the writer as to what navigability meant. In my conclusions I have had no theory in my mind that a river which has once been used for the purposes of commerce ceases to be a navigable stream because its use is discontinued.

3518 In my conclusions in my direct as to the extent to which I found the Desplaines navigable, I point out my authority, and those which used it for commerce. I stated several instances of people attempting to use the Desplaines for commerce, for instance, Hubbard. His experience was from 1818 to 1824, and steamboats did not reach as high as Peoria on the Illinois river until 1830. Evidently he was not using steamboats.

3519 They were attempting to improve the rivers from 1830 to 1840, for vessels, as I remember it, that were used upon the rivers at that time, and from memory I would say they were steamboats.

3520 The second branch of my third reason for my conclusion transcript page 2996 (Abst., 1207) refers to the head of navigation as on the Illinois river. I drew my conclusions from the authorities cited, which speak of the head of navigation in 1830; this probably referred to steamboat navigation. I am not sure whether during that early period they would think of steamboat navigation, or not. Certainly later they would think of the head of steamboat navigation. If steamboats were used after 1880, and I recall one or two as high as Peoria, it might be the head of steamboat navigation.

3521 The second subdivision of my third reason did not necessarily involve on my part the conclusion, nor convey the idea that a river is non-navigable unless it has been improved so that it can be navigated by steamboats, if improvement is necessary. I do not think I drew my own conclusions there. I merely stated that as a reason, that the head of navigation was always referred to as on the Illinois, and cited authorities.

3522 There would be involved whatever vessels were used at that time. If it was wholly steamboats, that is evidently what they were thing about; if it was something else they probably included the whole idea. I pointed out what to my mind constituted navigability. Whenever I use the word navigable the meaning that is to be conveyed by my mind by that word is conveyed. I recall no places where I purposely distinguished or by mistake made any distinction which could be made. Had a certain idea of what constituted navigability and that I have given you, and

3523 I have used the word in that connection.

The third branch of my third reason states in effect that the Canal Commission of 1825 report that the Desplaines was not navigable. The following paragraph was taken into consideration in that connection. (Reading) page 23:

"Many, and indeed we may say nearly all, of the canals that have been constructed, except those in the State of New York (the ultimate effects of which are destined to embrace objects of greater importance) or for the purpose of facilitating the communication along an accustomed highway; opening to commerce no new field—giving to agriculture no new excitement; but in relation to the intercourse between the Illinois and Lake Michigan the case is widely different. Here the canal will not only

furnish a safe and expeditious mode of conveyance between two important points, but to open the western states a new and additional market, and by the reciprocal advantages afforded, excite their citizens to industry
3524 and enterprise. It will, in truth, be adding one of the most important links to the American Commercial Chain, which must, by its effects, bind together the respective interests of the Atlantic and Western states, consolidate the commercial and political policy of the most distant parts of the Union, and give to the patriot a grateful theme."

It seems to me that involves the idea. He speaks about constructing new canals which are to open to commerce no new field; then he speaks about the Illinois and Lake Michigan and says the case is widely different, that it would open to the Western States a new and additional market. It conveyed to their mind that to open a communication that would be navigable they must make improvement.

Q. Do you think that the fact that they were to open a canal in order that a larger commerce might be carried on is equivalent to a report that no commerce could be carried on the river?

Objection; excerpt does not speak of a larger commerce, but contrasts between accustomed highways and one where there was none.

3525 A. I think I have answered it.

3526 The report has the idea clearly that it was not navigable. If it had been so they would not have used this language, that a canal would open a new market. I do not find the exact wording that it was not navigable.

When I said fourth, that it was not considered navigable by the legislature or Governor Coles, I had in mind the evidence I submitted in my direct in that connection, based upon the study I had made. My recollection is that I submitted evidence from the legislature.

3527 As to whether I recall that I submitted any act or resolution of the legislature expressing any opinion as to the navigability of the Desplaines, will say nothing positive.

3522 Here is one thing that gives a little light on the attitude of the legislature, but does not give positive evidence: Governors' Letter Book, 1818 to 1834, Vol. 4, page 85. "A letter from James B. Ray, Acting Governor of Indi-

ana''; points out that he has called the attention of the
3529 legislature to the need of connecting by artificial channels the navigable tributaries of the Mississippi with those of the great northern lakes. Then he says (reading):

"I have so far succeeded as to have provision made by law for the examination of the country and a survey and estimate of a canal connecting the former; and in connection with Indiana to have the obstruction to the navigation of the Wabash examined as far as the river was the common property of both states, and estimates made of the probable expense of removing them and perfecting the navigation. Reports in both cases were laid before the last General Assembly, and I renewed my recommendation and strongly urged on the favorable consideration of the members, the propriety of making provision for speedily commencing these desirable works. But, a majority were doubtful of the ability of the state to undertake them, and preferred incorporating companies in both cases. This was done, and I immediately transmitted to Gov. Hendricks the copy of an Act incorporating companies to perfect the navigation of the Wabash, which required the concurrence of Indiana for the purpose of having it acted on by the legislature of that state during its last session. * * * You will see from the foregoing brief statement of what has been done by this
3530 state, and from your knowledge of our resources, the local situation of our country, the character of our people, the nature of the obstructions to be removed, the immense advantages resulting and consequently the strong inducement to exertion you can judge whether I am mistaken in supposing the time not far distant when the waters of the Wabash and Erie will mingle and waft on their bosom vessels laden with the products of their vallies."

The WITNESS (continuing): This is simply an indication that the State of Illinois was surveying for the construction of an artificial channel, which would connect the Illinois with Lake Michigan; they finally built it.

3531 I notice that this Select Committee of the House of Representatives of the United States, transcript, page 306 (Abst., 140) of which you speak, calls attention to the fact that a memorial of the General Assembly of the State of Illinois praying aid to open this canal has been sent to Congress; that the commissioners appointed by the State of Illinois had

not yet reported; further represents that the state is unable from its own resources to defray the expenses of the undertaking, and therefore prays Congress to make to the state a grant of public land, or such other assistance as may be thought proper to enable the state to proceed with the work.

3532 This committee questions the practicability of a route and say they entertain no doubt on the point, since their conclusions are based upon scientific observation and actual experience. The experience to which they refer being a passage by an uninterrupted communication from the river into the lake, and which is a matter of historical notoriety, and scientific observations—the report of Major Long. All this report shows from the present examination is that they think it practicable, to connect the waters of the Illinois and Lake Michigan, basing it on the two lines of evidence pointed out.

It don't think that is all that the report of the canal commissioners amounted to. They have gone into it with more detail, and these people did not have that report.

3533 Think my analysis and conclusions in regard to report of Select Committee of Congress in favor of navigability of Desplaines and report of Canal Commission of 1825 against it will stand as I have made them.

Question of prices between Chicago and Peoria would necessarily refer to a period when there was exports from Chicago and when there was commerce between those two points. Fifth conclusion might rest upon further assumption that river is not to be regarded as navigable because steamboats were not used regularly upon it if steamboat was only method of transportation at that period. Does

3534 not necessarily involve assumption that the navigability

I have referred to is steamboat navigation. If there was navigation between those two places of any kind, the difference in prices would be no more than the cost of transportation. That would be true whether there was navigation or not. If river had been improved and there was continual navigation there is no doubt there would not have been this difference in prices. If there had been navigation between Peoria and Chicago or upon Illinois river, there would not have been the difference in prices. In using the word "navigability" I simply spoke about whether river was used for purposes of useful commerce in its unimproved state.

3535 As to whether I had in mind river which could actually be used and not one which could be improved so it could be, will say I think I have answered that question.

Q. That is what you have had in mind, isn't it, one that could actually be used?

Mr. SCOTT. I object; last preceding answer covers exactly question asked. Read answer; do not believe Mr. Wilkerson caught it.

(Previous answer read.)

The WITNESS. Taking my sixth conclusion, "The Illinois and Michigan canal changed the direction of freight." As to whether that conclusion does involve the assumption on my part that the Desplaines river has not been used for the carriage of freight for some time prior to the construction of the canal, and as to whether, therefore, the conclusion does involve a decision by me as to whether the Desplaines river was not navigable because it was not used for transportation of freight by water in the way in which transportation was then carried on, I would say that my conclusion there is stated clearly, that the Illinois and Michigan canal changed the direction of freight. Before the construction of the Illinois and Michigan canal, the commerce down along the Illinois river went by way of New Orleans and St. Louis, and after that period it commenced going by the north. It does not mean that all the commerce came immediately by way of the Illinois and Michigan canal.

Q. Now, Mr. Lee, I do not ask you as an expert on navigation, but from your experience in the study of the population and settlement of countries, and from your examination of all the historical references that have been included in your 3536 examination, and which have been referred to in your examination, I will ask you to state whether you have an opinion as to whether or not the Desplaines river was in its natural condition used for the purposes of useful commerce?

A. Are you asking me that question now?

Q. Yes.

A. I think that question has been answered, has it not? What page do you find it on?

Q. Read the question.

(Question read.)

Q. That is Mr. Scott's question, and I have changed the word "navigable" to the word "used."

A. I think I have pointed out, Mr. Wilkerson, the extent to which the Desplaines was used for purposes of useful commerce.

Q. Can't you give me the same direct answer to that ques-

tion that you gave Mr. Scott to his question? Read Mr. Scott's question and the answer and see if you can not give me just as direct an answer to my question as you gave Mr. Scott to his question.

A. I have found no evidence that the Desplaines was used for purposes of useful commerce during any regular period, or regularly.

3537 Q. At any time?

A. To give a full and complete answer to that I would have to give a detailed account of just how much it has been used. It was used for commerce by three men, that is the evidence that I have found. Those men were Perrault and Heward and Hubbard if I remember correctly.

3538 I do not think of any fundamental distinction between Mr. Scott's question on page 2995 (Abst., 1206) of record and your question on record page 3535.

Should not think that the river was used for purposes of useful commerce during that period. Should think it was not used; might add, for purposes of useful commerce regularly, or at any time, as far as the evidence that I have seen is concerned.

Mr. WILKERSON. That is all. Let the record show a motion to strike out the testimony of this witness on the ground that it does not appear by his examination, and it affirmatively appears by his cross-examination that he is not qualified to testify about the matters which he has testified to; and second, let the record show a specific motion to strike out each one of the conclusions of the witness as to which he is undertaking to testify as to the navigability or alleged navigability of the river.

The WITNESS (continuing): The evidence I have seen
3540 of the use of the river I have pointed out and the attempted use which Hubbard made he indicates. He used river in the way in which he indicates and he outlines three or four trips; no, two trips, I guess; one trip only that he gives details. We have that evidence of his use on the trip once, using it in the way that he did. When I said yes I meant that the river was not used at any time in which I would find regular commerce.

3541 *Re-direct Examination by Mr. Scott.*

On the 10th of March, this year, I gave to you as counsel for the defendant in this case copy of my thesis. Had not then

done any work for defendant in preparing for hearing in this case. Had not been informed defendant would desire me as witness in this case. That thesis has not been changed in any way since delivery of the copy to you on March 10th. Copy delivered to counsel for government in my presence during this hearing. Newspapers and county histories used in my direct were used by me before I met you and in the preparation of my thesis, as my footnotes will show. Thesis contains footnotes for the authenticity of statement I make. Think all of newspapers referred to by me on my direct are referred to in those footnotes. With regard to the county histories referred to in direct, used everyone of them that I now remember; think every one, if not, certainly large percentage of them. Would have to look that up to find out whether all of them were. Think in first chapter of my thesis there appeared a paragraph under heading of marginal note: "Settlement chiefly along the rivers."

Q. Will you read that into the record?

Mr. WILKERSON. Objected to as incompetent, irrelevant and immaterial; not proper redirect examination.

A. I read from page 4 of chapter 1, heading of paragraph is "Settlement chiefly along the rivers."

3543 "This settlement and development took place chiefly along the rivers. The rest of the country for the most part remained unpeopled and unimproved. This condition existed because the rivers furnished power for the mills and factories and were the main channels of commerce. Because, too, of transportation upon them they provided markets for the surplus products of the soil. Grain was exchanged at these river markets for clothing and articles of import. There, also, wheat was ground into flour and corn into meal. St. Charles on the Fox River, 'buzzing and roaring and ratling' with all kinds of machinery, was likened, in 1845, to the city of Lowell, Massachusetts. Thus almost every pioneer activity was confined to the river districts, which became well settled and well developed, while the prairie remained uninhabited and unorganized."

Don't know exactly date of settlement of Joliet. About 1831, or '32 or '33. Have seen references to it in my work in Illinois History as Juliet. Suppose it refers to same town.

There is a town in same neighborhood known as Romeo, I believe. It is right close to Joliet. Don't know exact location.

Have seen references to water power at Joliet as being
3544 great. Believe there is water power there and there is something like thirty feet fall in the river within the limits of the town. Referring to page 3097 of record (Abst., 1229), cross-examination, concerning editorial in St. Louis paper, with special reference to Perrault being at Cahokia and French traders being there, in regard to inference drawn as to trade by way of Illinois and lakes, have two or three references bearing on the course that the trade of the French from Cahokia, and in that vicinity, took during the period in question. DuPratz History of Louisiana is one volume. On pages 181 and 182 of that volume I find following (reading from page 181):

“It is by this river of the Miamis that the Canadians come to Louisiana. For this purpose they embark on the river St. Lawrence, go up this river, pass the cataraacts quite to the bottom of Lake Erie, where they find a small river, on which they also go up to a place called
3545 the Carriage of the Miamis; because that people come and take their effects, and carry them on their backs for two leagues from thence to the banks of the river of their name, which I just said empties itself into the Ohio. From thence the Canadians go down that river, enter the Wabache, and at last the Mississippi, which brings them to New Orleans, the capital of Louisiana. They reckon eighteen hundred leagues from the capital of Canada to that of Louisiana, on account of the great turns and windings they are obliged to take.”

That is the 1774 London edition of DuPratz. Think have given date in my former testimony of when DuPratz wrote. Page 182 is the following:

“In those countries there is a river, which takes its name from the Illinois. It was by this river, that the first travellers came from Canada into the Mississippi. Such as come from Canada, and have business only on the Illinois, pass that way yet; but such as want to go directly to the sea, go down the river of the Miamis into the Wabache, or Ohio, and from thence into the Mississippi.

In this country there are mines, and one in particular, called De la Mothe's mine, which is silver, the assay of
3546 which has been made; as also of two lead-mines, so rich

at first as to vegetate, or shoot a foot and a half at least out of the earth."

Next reference I have is taken from Hutchins Topographical description of Virginia on p. 497 of Imlay's America, 1797 edition (reading):

"Ouiatanon is a small stockaded fort on the western side of the Wabash, in which about a dozen families reside. The neighboring Indians are the Kickapoos, Musquitos, Piankashaws, and a principal part of the Ouiantanons. The whole of these tribes consists, it is supposed, of about 1,000 warriors. The fertility of soil and diversity of timber in this country, are the same as in the vicinity of post Vincent. The annual amount of skins and furs obtained at Ouiatanon is about 80001. By the river Wabash, the inhabitants of Detroit move to the southern parts of Ohio and the Illinois country. Their route is by the Miami river to a carrying-place, which, as before stated, is nine miles to the Wabash, when this river is raised with freshets; but at other seasons, the distance is from 18 to 30 miles, including the portage. The whole matter of the latter is through a level country. Carts are usually employed in transporting boats and merchandise from the Miami to the Wabash river."

3547 Next reference is Coxe's Louisiana, "A Description of the English Province of Carolana, by the Spaniards called Florida, and by the French La Louisiana. As Also of the Great and Famous River Meachacebe or Mississippi, the Five Vast Navigable Lakes of Fresh Water, and the Parts Adjacent. Together with an Account of the Commodities of the Growth and Production of the said Province. By Daniel Coxe." Think that was published in 1722; nothing given here. As to whether it is the original edition; no date is given. Is found in Historical Collections of Louisiana, French, Vol. 2. I read from page 231 of that volume.

Mr. WILKERSON. Objection: incompetent, irrelevant and immaterial, not proper redirect; further, on ground book not sufficiently identified.

The WITNESS. Book that I read from, Coxe's Carolana, is written by Daniel Coxe, as I understand, based upon notes taken by Dr. Coxe, who was, I think, physician of Charles II of England, and as I understand, was published in 1722 (reading):

3548 "On the southeast bank of this river, Monsieur de la Sale erected a fort in the year 1680, which he named

Creve-coeur, from the grief which seized him on the loss of one of his chief trading barks richly laden, and the mutiny and villainous intrigues of some of his company, who first attempted to poison and afterwards desert him. This fort stands about half way between the bay of Mexico and Canada, and was formerly the usual route of the French in going to or returning from either of those places; but since, they have discovered a nearer and easier passage by the Ouabache and Ohio, the sources of both which rivers are at a small distance from Lake Erie, or some rivers which empty into it."

That is all the reference I have on this point, I believe. I have a reference to Carter's work which points out where the trade of this area was going. Have referred to the work on cross-examination and think I have sufficiently identified it. That is the work in which Mr. Alvord's name was referred to in the preface. It says in the preface, in regard to that (reading):

3549 "I desire to express my gratitude for aid and encouragement to Professor Evarts B. Greene, in whose seminar in history at the University of Illinois this essay was begun, and especially to Professor Clarence W. Alvord of the University of Illinois, whose intimate knowledge of the field has been of material assistance throughout my study. I also wish to express my thanks for helpful criticisms of the manuscript to Professor Guy Stanton Ford of the University of Illinois, to Professor C. H. Rammekamp and to Professor J. Griffith Ames of Illinois College, and to Professor Charles H. Hull of Cornell University, chairman of the Justin Winsor Prize Committee. I owe an especial debt of gratitude to my wife and faithful amanuensis, without whose encouragement the essay would not have been completed in its present form."

This is one of the theses written by men for the Justin Winsor Prize; prize essay of the American Historical Association, and was given a prize. Was recognized as standing authority, carefully written piece of work among authorities. The
3550 Justin Winsor referred to is same authority who has been referred to in the testimony here. On page 11 of the book which I have in my hand I find the following (reading): "The relation of the Illinois country to Louisiana was economic as well as political."

Book deals with period of 1763 to 1764 (reading):

"All of the trade of the upper Mississippi valley was

carried on through New Orleans, and the southern colony often owed its existence to the large supplies of flour and pork sent down the river. Although the inhabitants occupied themselves chiefly with hunting and with trading with the Indians, they yet raised a considerable amount of corn, wheat, and various kinds of fruit, which, together with cattle and hogs they frequently shipped to the New Orleans market."

Mr. WILKERSON. Objection to this on ground of incompetency, immateriality and irrelevancy and further that it is not proper cross-examination.

The WITNESS (reading from page 81):

3551 "The foregoing considerations serve to indicate the importance which the ministry attached to the Indian trade in general. But what of the trade in the Illinois country? This region had been one of the great centers of the Indian trade under the French regime; and in addition the French inhabitants had been one of the main supports of New Orleans since its foundation early in the century. The commercial connection between the Illinois villages and New Orleans had never been broken, and at the time of the occupation of Illinois in 1765, French fur traders and merchants still plied their traffic up and down the Mississippi river. Now that the title to this trade centre had passed to England it was expected that the volume of trade would be turned eastward up the Ohio river. The necessity for this was patent if any material benefits were to accrue to the empire from the cession, for failure to carry out the plan would leave the country a dead weight on the empire.

3552 The home and colonial authorities early saw the importance of turning the course of the trade. They hoped and expected that a trade would be opened with the Indians in and about the Illinois country immediately after the active occupation by the English troops. A large number of individual traders were early aware of this and representatives of some of the large trading companies of the east were also preparing to take advantage of the opening of the west to trade. In 1765 Fort Pitt became the great rendezvous for this element. From this point traders, with their cargoes to exchange for the Indians' furs, followed the army to Fort de Chartres as soon as the season of the year would permit."

(Page 88) reading:

3553 "It has been expected that the Illinois villages would be the center of trade for the English side of the upper Mississippi Valley just as it had been one of the centers during the French regime. But the English were not so well situated to command the trade as the French had been. Previous to this time the trade of the Missouri river region had centered at the Illinois posts, but after the cession of the west to England and the foundation of St. Louis by Laclède in 1764, the latter place drew all the trade west of the Mississippi. Moreover, except for the few tribes of Illinois Indians in the immediate vicinity very few savages found their way to Fort de Chartres for trading purposes. English traders, on the other hand, did not trust themselves far beyond this narrow circle, but their French and Spanish rivals from Louisiana, many of whom formerly lived in the Illinois country, carried on a trade in all directions both by land and by water. They ascended the Ohio, Wabash, and Illinois rivers, and crossed the Mississippi river above the Illinois, plying their traffic among the tribes in the region of the Wisconsin and Fox rivers. This was probably the most productive area in the Mississippi valley in the supply of fur bearing animals. The Mississippi river northward from its junction with the Illinois was also considered especially good for the peltry business, the otter, beaver, wolf, servine, and martin being found in abundance, but the British traders dared not venture into that quarter. The loss of this trade, however, cannot be attributed altogether to their misconduct, for the French had never allowed it to pass from their own hands. The latter continued to intrigue with the Indians throughout the greater part of this period just as they had done prior to 1765. As we have seen they pointed out to the savages how they would suffer from the policy of economy practiced by the British government. Thus by giving presents and by circulating stories and misrepresentations the French subjects of Spain attempted to checkmate every move of the English. The Indians were constantly reminded of the bad designs on the part of England, and were encouraged with unauthorized promises of aid in case they should take up the hatchet in defense of their hunting grounds."

3554

On page 88, a footnote as follows:

Mr. WILKERSON. Same objection.

(Reading):

“ ‘To ascend the Mississippi or Illinois rivers with Goods would be certain death, so great is the influence of the French there.’ Morgan to Baynton and Whar-ton, December 10, 1767, MS. letter book. Lieutenant Hutchins, as English engineer, who spent a year in the Illinois country, stated that the ‘Peltries in general that are sent from the British side are obtained from the
3555 French traders on the Spanish Shore, as no English-
man can with safety venture among the Savages.’
Hutchins, ‘Remarks upon the Country of the Illinois’,
MS. in Hist. Soc. Pa. Library.”

On page 89 (reading):

“During the first years of the British occupation there was considerable friction in the contact of the two alien peoples in the Illinois villages. In spite of the fact that the French who remained became subjects of Great Britain sharp competition existed for several years between the English and French residents in the vicinity of the villages. The latter were on terms of friendship with the savages and could go into any part of the country without difficulty and those Indians who came to Fort de Chartres to trade generally preferred to deal with their trusted friends. The French often carried the packs of furs thus obtained across the river to St. Louis or transported them directly to the New Orleans market. Although the British merchants were occasionally able to pool their interests with the French residents, such cases were exceptional prior to 1770. In that year, however, General Gage informed the home government that ‘the competition between his Majesty’s old and new Subjects is greatly abated and must by degrees subside, for if carried to extremes it would be very prejudicial to both.’”

3556 Naturally the large quantities of furs and skins obtained by such contraband trade as well as by the French residents of Illinois were taken directly to New Orleans and there embarked for the ports of France and Spain. These foreign interlopers, however, only followed the route to which they had long been accustomed. On the other hand it was expected by the government that the

traders who carried English manufactured goods down the Ohio river would return by the same route with their canoes of peltry for the purpose of transporting them to England. But in this the government was disappointed. English traders and merchants followed the line of least resistance, the route down the Mississippi to New Orleans. Moreover, the New Orleans market was attractive, for peltries sold at a higher price there than in the British markets. The tendency of the English traders and merchants to follow this course was discovered soon after the occupation. In a communication to Secretary Shelburne in 1766 Gage informed the government that 'it is reported that the Traders in West Florida carry most of their Skins to New Orleans, where they sell them at as good a price as is given in London. As I had before some Intelligence of this, the Officer commanding at Fort Pitt had orders to watch the Traders from Pensilvania who went down the Ohio in the Spring to Fort Chartres; and to report the quantity of Peltry they should bring up the Ohio in the Autumn. He has just acquainted me that the traders do not return to his Post, that they are gone down the Mississippi with all their Furs and Skins under the pretense of embarking them at New Orleans for England.' A few weeks later he wrote again in a similar strain: 'That trade will go with the Stream is a maxim found to be true from all Accounts that have been received of the Indian trade carried on in that vast Tract of Country which lies on the Back of the British Colonies; and that the Peltry acquired there is carried to the Sea either by the River St. Lawrence or River Mississippi.' Gage seemed to believe that the part which went down the St. Lawrence would be transported to England; but that the peltry passing through New Orleans would never enter a British port. 'Nothing but prospect of a superior profit or force will turn the Channel of Trade contrary to the above maxim.' 'The Traders from these Colonies say that it will not answer to carry Goods down the Ohio, but that it will not answer to return with their Peltry by the same Route as they can get to the Sea at so much less expense, and greater expedition by means of the Rapidity of the Mississippi, and pretend that they have Ships at New Orleans to trans-

port their Peltry to England.' " * * * the British Traders at the Illinois who carry their goods above
3558 three hundred miles by land before they have the convenience of Water Carriage cannot afford to return the same way with the produce of their Trade.' In this opinion Sir William Johnson likewise concurred. Lieutenant John Phyn, of the British Army, who spent some time at Fort de Chartres in 1768, also declared that 'as long as New Orleans is in the hands of another power, the whole produce of that country must centre there. For our merchants will always dispose of their peltry or whatever the country produces, at New Orleans where they get as good a price as if they were to ship them off.' "

On page 93 (reading) :

"Conditions, however, grew no better as time went on. In 1773 we find Gage complaining that 'the Trade of the Mississippi, except that of the upper parts from whence a portion may go to Quebec, goes down that river; and has, as well as everything we have done on the Mississippi * * * tended more to the Benefit of New Orleans than of ourselves.'

An examination of the customs returns for the period from 1763 to 1775 indicates that the statements of English officials relative to the productivity of the West were not groundless. Instead of an increase in the number and value of furs and skins imported into England as
3559 a result of the French cession of the great fur-bearing regions of Canada and the Northwest, there is a decided decrease each year. A diminution is likewise to be noted in the value of the exports from Canada during the same period."

I have the Kaskaskia records here. I find something in the memorial of William Newbold and others, to which my attention is called, on page 470 as to how the furs in that upper part of the Mississippi went to Quebec. The full title of the book, reading from the title page is:

"Collections of the Illinois State Historical Library
Volume V. Virginia Series, Volume II. Kaskaskia Records 1778-1790. Edited with Introduction and Notes by Clarence Walworth Alvord, University of Illinois. Published by the Trustees of the Illinois State Historical
3560 Library, Springfield, Illinois, 1909."

Mr. Alvord is editor. Excerpt I refer to is on page 470. It is a memorial. Reading title of memorial:

"George Morgan Petitions for Land, May 1, 1788. To the Honorable, the United States of America in Congress Assembled."

(Reading first paragraph to show who the memorial is.)

"The Memorial of William Newbold, Cleayton Newbold & Joseph Newbold of Springfield, John Cox of Bloomsbury, Joseph Bloomfield of Burlington, Joel Gibbs of Mansfield, Daniel Vardon of White-hill, all of Burlington County—George Morgan of Prospect, Isaac Smith, Samuel W. Stockton, David Brearley & Aaron Dunham of Trenton, Richard Stockton of Morven, Frederic Frelinghuysen & Henry Vandike of Sommerset County & Evist Van Wickle of Spottswood Middlesex County, all of the State of New Jersey & William Edgar of the City of New York, by their agent George Morgan duly authorized & appointed for the Purpose."

3561 Mr. WILKERSON. Objected to as incompetent, immaterial and irrelevant.

I understand Morgan is man referred to in evidence heretofore. The excerpt to which I refer reads:

"Your Memorialists are of Opinion that this is the natural channel for 9/10ths of the rich Fur Trade which is at present carried to Canada as Returns may be made to these states in twelve Months which require three & often four Years to be made to Montreal, from the difficulties of the Navigation & the Numerous Portages by the lake of the Woods to the most Northern Sources of the Mississippi, from whence the richest Furs are derived."

Being asked to read first page of Memorial itself, the witness read as follows:

3562 "Respectfully sheweth, That they for themselves & their Associates are desirous to contract for & to purchase from the United States of America, Two Million Acres of Land situated & bounded as follows—Beginning at the river au Vase where the Line of the Army Lands extended due West from the Mouth of the little Wabash River shall strike the said River au Vase, thence due North until a due East line extended from the Mississippi River at the Mouth of Wood River shall intersect the same, thence due West to the Mississippi River at the Mouth of Wood River aforesaid, thence down the

Mississippi River along the Boundary Line of the United States of America to the Mouth of the River au Vase, thence up the said river au Vase along the several Courses thereof to the Place of Beginning—(saving & reserving to the Inhabitants of Kaskaskias, Prairie du Rocher, Fort Chartres, St. Phillips & Kakohia, & all others having just claims, their respective Rights within the said Boundaries, to be determined as Congress shall direct) for which your Memorialists by their said Agent will engage to pay on Similar Terms granted by Congress to other Companies, or on such other Terms as their Agent may deem more advantageous to their Interest."

3563 Q. Now returning to Carter, are there any further references in Carter on this Point?

Mr. WILKERSON. Same objection.

A. Beginning with page 94 of Carter. (Reading):

"It is difficult to figure exactly what the loss to imperial interests was under these conditions. Furs and skins, however, being among the enumerated commodities some loss certainly accrued to British shipping and to the government through loss of the duty, as well as to English manufactures. Although practically no peltries reached the Atlantic ports from the Illinois region, large quantities were carried to New Orleans. The few who have left any estimate of the amount of peltries exported to New Orleans agree in general that from five hundred to one thousand packs were shipped annually from the Illinois country. According to the usual estimate five hundred packs were worth in New Orleans about five thousand five hundred pounds sterling. As the same time the expense of maintaining the various posts and the Indian department was heavy. The Indian expenses at Fort de Chartres alone between September, 1766, and September, 1767, were more than six thousand pounds sterling. In the following years the expenses for nine months in Indian affairs, fitting out an armed galley to prevent illicit trade, and in repairs on Fort de Chartres and new works of defense in expectation of an Indian rupture exceeded two thousand pounds sterling.

3564 There seems to have been unanimity of opinion respecting the commercial inutility of the Illinois and surrounding country under existing conditions. Effective

though expensive measures would have to be taken to change the course of trade and to expel foreign traders. But General Gage was very doubtful about the probable efficiency of any further regulations. Early in 1767 he declared that it would 'not answer to England to be at much expense about the Mississippi' so long as better prices prevailed at New Orleans. Secretary Hillsborough took the same view a few years later, in an argument against the planting of western colonies: 'This Commerce cannot * * * be useful to Great Britain otherwise than as it furnishes a material for her Manufactures, but it will on the contrary be prejudicial to her in proportion as other Countries obtain that material from us without its coming here first; and whilst New Orleans is the only Port for Exportation of what goes down the Mississippi, no one will believe that that town will not be the market for Peltry or that those Restrictions, which are intended to secure the exportation of that Commodity directly to G. Britain, can have any effect under such circumstances.

3565 The original intention of the British government had been to use Fort de Chartres, on the east bank of the Mississippi between the Illinois and Kaskaskia rivers, to guard the rivers in order to prevent contraband trading. But its inefficiency was soon apparent. Although well constructed, its location was not strategic; it commanded nothing but an island in the river. An indication to the Indians of British dominion and a place of deposit for English merchants constituted about the sum total of its efficiency in order to make the Illinois country effective as a barrier against foreign aggression and to keep the trade in English hands, it was necessary to adopt measures looking toward the closing of those natural entrances into the country, the mouths of the Illinois and the Ohio rivers. Almost all the correspondence of the time relating to Illinois, contains references to the practicability of erecting forts at the junctions of the Illinois and Ohio rivers with the Mississippi. In most cases this was insisted upon as the only practicable measure to make the country of value. Suggestions were also offered relative to the erection of a fort on the Mississippi river above its junction with the Illinois for the protection of that section of the peltry district. Moreover, projects were likewise proposed for the establish-

ment of proprietary colonies on the Ohio and Illinois rivers. Gage himself suggested that all the French villages along the Mississippi be amalgamated into one settlement, which would also be the center of the military establishment, and from which detachments could be sent out to guard the rivers and prevent British traders from descending the stream to New Orleans and likewise for foreign interlopers."

On page 95 there is a footnote from Hutchins, "Remarks upon the country of the Illinois, 1771."

Mr. WILKERSON. Same objection.

The WITNESS (continuing, reading):

"From New Orleans, where all the western trade finally centered, it was estimated that peltries worth between 75,000 and 100,000 pounds sterling were sent annually to foreign ports. Gage estimated it at 80,000 pounds sterling. Gage to Shelburne, January 17, 1767, B. T. Papers (Hist. Soc. Pa.) Vol. XXVII. 'New Orleans remits one hundred thousand pounds sterling worth of Peltry annually to France,' Baynton, Wharton and Morgan to McLeane, October 9, 1767, *ibid.* Vol. XXVI."

(Reading footnote on page 98): "Gage to Shelburne, April 3, 1767, *ibid.*, Vol. 123; Johnson, 'Review of the Trade and Affairs of the Indians,' *loc. cit.*; Morgan to Baynton and Wharton, December 10, 1767, Morgan's MS. letter book. 'A Post up the Mississippi at or near the Illinois River might leave to us the greater part of the Trade that is now carried to the Settlements on the other side.' Hutchins, 'Remarks upon the Country of the Illinois, 1771,' MS. in Hist. Soc. Pa. Library. George Croghan wrote: 'With respect to the building some new Forts there—I conceive they are indispensably necessary. One at the Mouth of the Illinois and one on the Wabashe; as they would effectually prevent the French and Spaniards from entering into the Indian Country and thereby seducing the trade from us, to France and Spain.' Croghan to Franklin, January 27, 1767, Lansdowne MSS., Vol. XLVIII, fol. 135."

(Reading first paragraph on page 114):

"There was still another important reason for the rejection of interior settlements, which comes to light in contemporary correspondence, but which is not contained in the report of the Board of Trade. During this period Louisiana, with New Orleans commanding the mouth of

the Mississippi river, was in the hands of Spain. New Orleans was practically the only outlet for the western country, and it was the settled conviction of many that so long as it remained in the possession of a foreign power, it was useless to expect much from the West. In 1768 Lieutenant George Phyn of the regular army was sent from Fort Pitt down the Ohio and Mississippi rivers to Mobile, and in writing to Sir William Johnson he declared that the country in and about the Illinois region would never be settled 'with any advantage to England' unless New Orleans were procured."

(Reading the footnote on page 141):

"April 15, 1768, Johnson MSS., Vol. XXV, No. 109. He affirmed that a settlement 'will never happen with any advantage to England until we can procure the
3568 Ideal Island of Orleans: * * * could we find passage for even small craft to go to the Sea, the Country of the Illinois would be worthy of attention, but had we the Island of Orleans, that country would in a very short time I believe be equal to any of our Colonies.'"

(Reading on page 142 of same volume):

" 'This commerce' he affirmed, 'cannot (I apprehend) be useful to Great Britain otherwise than as it furnishes a material to her Manufactures, but it will on the contrary be prejudicial to her in proportion as other Countries obtain that material from us without its coming here first; and whilst New Orleans is the only Port for Exportation of what goes down the Mississippi, no one will believe that that town will not be the market for Peltry or that those Restrictions, which are intended to secure the Exportation of that Commodity directly to G. Britain, can have any effect under such circumstances.' "

I find that Louis Kimball Mathews, who has written a book on "The Expansion of New England" that has been accepted as an acceptable work on history, declares that the work of William Vipond Pooley from which I quoted is an admirable study.

Q. Do you find any reference in Frederick J. Turner to Pooley?

3569 Mr. WILKERSON. Same objection.

A. I do, in the author's preface. (I read from the author's preface of Turner's *Rise of The New West*, which is the same work that has been referred to here by the government):

"I desire to express my cordial appreciation of the friendly criticism and assistance I have received from the editor, Professor Hart. To Professor Carl R. Fish, Professor A. A. Young, and Dr. U. P. Phillips, my colleagues, I am indebted for a critical reading of several chapters. I have drawn on the manuscript sources possessed by Dr. Phillips for information on many points of southern history. Several of the topics dealt with in the volume have been investigated by graduate students in my seminary; particularly I have profited by the papers of Professor Homer C. Hockett on the Missouri Compromise and the rise of Jacksonian democracy; of Mr. Royal B. Way, now instructor in history in Northwestern University, on internal improvements; and of Dr. W. V. Pooley and Mr. A. C. Boggess on the settlement of Illinois. Mr. S. J. Buck, my assistant in American history, prepared under my direction some of the maps, particularly those of congressional votes."

I have before me the map appearing on page 314 of Pooley, (For copy of said map see Appendix p.), to which my attention was called when I was asked on cross-examination (Trans., page 3139; Abst., 1240): "In view of what you have said about settlement following the rivers, what have you to say about the failure of settlers to go along the Mississippi?"

3571 Q. Your attention was called to the fact that the shaded portions of map containing six or more people per square mile, showed population as thus indicated on the Mississippi only to a point below Quincy and on the Illinois only to point below Lewiston, and you were asked about failure of settlers to go along Mississippi. What significance is to be drawn from the fact that population, as shown by that map, reached only to the points mentioned?

Mr. WILKERSON. Objected to because question has already been answered on cross.

A. It seems to me that the only significance that would have would be that the population settled along and was gradually working up rivers, but had only gotten up as far as map indicated at time map was drawn in 1830.

Mr. SCOTT. Q. Does it indicate how the population came into that country?

Mr. WILKERSON. Objected to as leading.

A. It would indicate that they came in from south and must have followed rivers in settlement previous to 1830.

Mr. WILKERSON. Move to strike out answer as conclusion.

Mr. SCOTT. Q. Can any significance be drawn from 3572 fact that population extended only to those points on river, and did not extend to present site of St. Paul, inconsistent with proposition that early settlements followed the rivers?

Mr. WILKERSON. Objected to as not proper re-direct, leading, and calling for conclusions of witness.

A. No, sir.

Mr. SCOTT. Why not?

Mr. WILKERSON. Same objection.

A. It was simply going up rivers and by this time had gotten only so far as map indicates.

Mr. SCOTT. Q. Referring to Schoolcraft, cross-examination, pages 3176, 3177 (Abst., 1250), the paragraph in which he says canal of eight or ten miles must fall far short of grand purpose, you were asked if he didn't mean canal of this length was needed to perfect communication for large boats. Is there anything in that portion indicating he meant canal of eight or ten miles was only required to perfect navigation for large boats at all seasons of year?

Mr. WILKERSON. Objected to; passage is in record; question is improper re-direct and calls for statement of witness' conclusion.

3573 A. His experience—perhaps I had better turn to the excerpt itself. His experience points out that he had to make a much longer portage at that time of year, so if it were to make a channel or water communication that would be desirable for any time of the year, he must have had that in mind, because his experience would show no such indication.

Mr. WILKERSON. Move to strike out answers as not responsive to question, and as statement of conclusion.

His experience was with light canoe. Reference was made to Carver's reliability in connection with Featherstonehaugh's statement that he found certain observations of Carver to be accurate, while Keating's observations as to same matter were inaccurate. As a historical critic would say Featherstonehaugh cannot be discredited because he stated that observations made by Carver as to natural features which Featherstonehaugh saw were correct.

Mr. WILKERSON. Objected to as leading and calling for a conclusion.

A. No.

Mr. SCOTT. Q. Some reference was made to Carver and

Bourne's statement as to Carver. What have you to say as to Carver's general standing?

Mr. WILKERSON. Objection as incompetent, irrelevant, immaterial and not proper re-direct.

3574 A. As stated in my examination the other day, Carver's book during the early period was open to criticism. Bourne has made an analysis of that and study of Bourne's criticism in that respect possibly will point out what weight should be placed on Carver.

Mr. SCOTT. Q. State in any way to get at it what weight should be placed on Carver.

Mr. WILKERSON. Same objection.

A. Carver's work is to be divided, part as plagiarized from various works and part of it is reliable, as Bourne rightly divides it in this study.

Q. Which portion is reliable?

Mr. WILKERSON. Same objection.

A. What is known as the Travels, Travels of himself and the Origin of the Indian tribes is reliable.

Statements in regard to natural features which Featherstonehaugh afterwards referred to appear in the Travels.

Mr. WILKERSON. Same objection.

Bourne, as authority for statement substantially that Carver was not accurate or reliable pointed out that book is divided in two main divisions; one the journal, the
3575 Travels; other part, Origin, Manners, Customs, Religions and Language of the Indians. Bourne makes careful study of portion of dealing with the Origins, pointing out that the work is largely work of plagiarism, taken from Charlevoix, Adair, La Hontan and different sources, pointing out what Schoolcraft pointed out at an earlier period. Bourne lays down test for second part on page 300 of Volume XI of the American Historical Review. (Reading): "To pronounce upon the work of this part of the book first-hand intimate knowledge of the field of observation is required." Next sentence is (reading): "This qualification William H. Keating, the scholarly and painstaking geologist and historian of Long's expedition to the source of St. Peter's river in 1823, possessed in a high degree." Next sentence is (reading): "The members of Long's expedition naturally gave Carver's account a more critical scrutiny under more favorable conditions than has been the case since or is likely to be in the future."

That sentence indicates Bourne did not know of Featherstonehaugh's trip because he says no one has had opportunity to scrutinize this before. But the point I wanted to call attention to was that Bourne lays down test that it would be necessary to make in order to test Carver's work. In this sentence, he points out that he could not make such a test.

"Turning now to the first part of the narrative proper of Carver's Travels, is it a genuine record of experience and did he write it, or was it written by another from his memoranda or oral recollections? So far as I can judge by literary evidence, I should reply that Carver was the source rather than the author of the narrative."

I believe I said he stated that he does not state exactly that he could not make the test. He does point out that his method of judging was by internal literary evidence, and to make true test of this he would have to be on the ground. In study of Bourne in which he says he cannot really make true test because he has not been on ground, it is to be noted that the only author he cites to overthrow Carver's work is this work of Keating's. Point that has been made and I make at this time is that Featherstonehaugh was on ground, having with him Carver and Keating, actually checking both up and he makes test Bourne says is necessary to make a true test and he finds, as I pointed out in direct, that Keating is surprisingly erroneous and Carver is accurate. He also points out in what respect that is proven, citing certain specific instances, and I think he makes the statement that he generally found Keating surprisingly erroneous. Schoolcraft makes further statement as to Carver's reliability. It is in this volume, page 293, same volume to which I have been referring (reading):

3578 "Carver, who went from Boston to the Mississippi in the latter part of the 18th century, is not an author to glean much from. I, however, re-perused his volume carefully, and extracted notes. Some of the stories inserted in his work have thrown an air of discredit over it and caused the whole work to be regarded in rather an apocryphal light. I think there is internal evidence enough in his narrative to prove that he visited the chief portions of country described."

Schoolcraft thinks, so far as narrative is concerned, after

careful perusal, it is accurate; there is internal evidence that he made the journey.

3579 Mr. WILKERSON. Move to strike out that he expressed it as accurate as not in accordance with the extract.

Mr. SCOTT. All right, that may go out.

On page 291 of book referred to he says:

"The project, in the end, proved impracticable, and all that Carver was able to accomplish was a journey from Michilimackinac to the Mississippi by the Fox and Wisconsin river route, a voyage up the Saint Peter's or Minnesota river, and, upon his return, the exploration of northern Wisconsin and the north shore of Lake Superior."

Have checked up statement in Pooley, about which was asked on 3202 of record, that Peoria, oldest town in this part of state, had been destroyed in closing years of eighteenth century.

Q. What have you found?

Mr. WILKERSON. Objected as not proper re-direct, incompetent, irrelevant and immaterial.

A. I found that book which has been used by the State in this case, Drown's Peoria, refers to this point on page 57.

3580 "In 1818 Illinois was admitted into the Union. This was the year before our present population dates; prior to that period the inhabitants consisted, as I have before said, of the native tribe of 'Peoriaca,' or Peorias, Indian traders, hunters, idlers, &c. (for every community has more or less of this class, who live upon the earnings of others), who from that happy faculty peculiar to the Canadian French, of adapting themselves to their associates, continued to live together at this place till within a year or two of the present population, with the exception of a time about the year 1781, or close of the revolutionary war. About that time they became alarmed for their safety and abandoned this place, and took up their residence in the French settlements in Canada, and on the Mississippi. Peace having been concluded between the contending parties for our Independence, the danger they apprehended being over, or rather their fears allayed, they returned two or three years afterward to their old places and friends, and resided here until 1812."

In American State Papers, Public Lands, Volume 3, page 477, Document 327, of 16th Congress, Second Session, is a re-

port in which I find reference to this subject matter. (I read from title page):

3581 "American State Papers, Documents, Legislative and Executive, of the Congress of the United States, From the First Session of the Fourteenth to the First Session of the Eighteenth Congress, Inclusive: Commencing December 4, 1815, and Ending May 27, 1824. Selected and Edited, Under the Authority of Congress, by Walter Lowrie, Secretary of the Senate, and Walter S. Franklin, Clerk of the House of Representatives. Volume Washington: Published by Gales and Seaton, 1834."

Report is headed "Claims to Lots in the Village of Peoria, Illinois, Communicated to the Senate, January 10, 1821," headed "Land Office at Edwardsville, November 10, 1820," addressed to "William H. Crawford, Secretary of the Treasury of the U. S."

(Reading):

3582 "The inhabitants of Peoria consisted generally of Indian traders, hunters, and voyagers, and had formed a link of connexion between the French residing on the waters of the great lakes and the Mississippi river. From that happy faculty of adapting themselves to their situation and associates, for which the French are so remarkable, the inhabitants of Peoria lived generally in harmony with their savage neighbors. It would seem, however, that, about the year 1781, they were induced to abandon the village from the apprehension of Indian hostility; but soon after the peace of 1783, they again returned, and continued to reside there until the autumn of the year 1812, when they were forcibly removed from it, and the place destroyed by a Captain Craig, of the Illinois militia, on the ground, as it was said, that he and his company of militia were fired on in the night while at anchor in the boats before the village, by Indians, with whom the inhabitants were suspected by Craig to be too intimate and friendly."

Was mistaken when I referred to a Mr. McCarty at page 3222 of the record and gave statement as to who he was, that he was in University of Iowa, took his work there and wrote this book there. Was thinking of man by name of Daniel Clark when identified him with University of Iowa; was mistaken in man. Have since learned McCarty was the man who started this work in connection with Harvard University and has since worked upon it, believe, in libraries of this city

and other libraries in northwest. Think was not ever connected with University of Iowa. Was earlier connected with Iowa College at Grinnell.

3583 As authority for statement made on page 3487: "Certainly, in accordance with my knowledge the Desplaines at some times of the year would be a mere brook," I find on page 115 of transcript (Abst., 50), of this case an extract from St. Cosme (reading):

"They had already made two leagues portage, and there were still four to make to Monjolly, which we made in three days and arrived on the 8th of the month. From Isla a la Cache to Monjolly is the space of seven leagues. You must always make a portage, there being no water in the river except in the spring. All along this river is very agreeable. * * *

On leaving Monjolly we made about two leagues to another little portage of about a quarter of a league. As one of our men, named Charbonneau, had killed several turkeys and geese in the morning and a deer, we did well to give somewhat of a treat to our people and let them rest for a day.

On the 10th we made the little portage and found
3584 half a league of water, and then two men towed the canoe for a league; the rest marched on land, each with his pack, and we embarked for the space of a league and a half and stopped for the night at a little portage, five or six arpens off.

On the 11th, after making the little portage, we came to the river Tealike, which is the real river of the Illinois; that which we had descended being only a branch.
• • •

From Chicagvv to the Fort they reckon thirty leagues. Here navigation begins, which continues uninterrupted to the Fort of the Permavevvi, where the Indians are now. We arrived there on the 19th of November."

Should not think St. Cosme meant steamboat navigation when referring to head of navigation. On page 344 of transcript is excerpt taken from Lyman E. Cooley's report.
3585 "The river itself except in floods, is very shallow, being often reduced in dry seasons to a mere brow, discharging less than 1,000 cubic feet of water per minute." That is my mistake, is not report of Cooley, but report of James H. Wilson, Lieutenant Colonel 35th Infantry. Next reference is

page 711 of transcript (Abst., 295), La Salle's account, which is as follows:

"That might perhaps happen in the spring time, but not in the summer, because there is no water at all in the river as far down as Fort St. Louis, where the navigation of the Illinois river begins at this season and extends as far as the sea."

On page 712 of same account is following:

"Again navigation would be for only a short time, at most for 15 or 20 days in the year, after which there is no longer any water."

3586 Have no further reference on that point. Have examined Frederick J. Turner's *Rise of the New West* having in mind question as to who Semple, McCarty and Pooley were, whose testimony I referred to in connection with my statement that the rivers were used by early settlers and as to the weight to be given to those authorities.

Q. You were asked (Trans. 3238, Abst., 1265) whether you saw any significance in the title of the book. Did you find any statement in Turner himself indicating what he meant by that title?

Mr. WILKERSON. Objected to as not proper re-direct.

A. On page 67, Chapter 5 begins:

3587 "The rise of the new west was the most significant fact in American history in the years immediately following the war of 1812. Ever since the beginning of colonization on the Atlantic coast a frontier of settlement had advanced, cutting into the forest, pushing back the Indian, and steadily widening the area of civilization in its rear. There had been a west even in early colonial days; but then it lay close to the coast. By the middle of the eighteenth century the west was to be found beyond tide-water, advancing towards the Alleghany Mountains. When this barrier was crossed and the lands on the other side of the mountains were won, in the days of the Revolution, a new and greater west, more influential on the nation's destiny, was created.

The men of the 'Western Waters' or the 'Western World,' as they loved to call themselves, developed under conditions of separation from the older settlements and from Europe."

"Western Waters" and "Western World" is in quotation marks. In my judgment, following references throw light upon use of the waters by the settlers (reading p. 74):

"The maps of the United States census, giving the

distribution of population of 1810, 1820 and 1830, exhibit clearly the effects of the defeat of the Indians, and show
3588 the areas that were occupied in these years. In 1810 settlement beyond the mountains was almost limited to a zone along the Ohio river and its tributaries, the Cumberland and the Tennessee. In the southwest, the vicinity of Mobile showed sparse settlement, chiefly survivals of the Spanish and English occupation; and, along the fluvial lands of the eastern bank of the lower Mississippi, in the Natchez region as well as in the old Province of Louisiana there was a considerable area occupied by planters.

By 1820 the effects of the War of 1812 and the rising tide of westward migration became manifest. Pioneers spread along the river courses of the northwest well up to the Indian boundary. The zone of settlement along the Ohio ascended the Missouri, in the rush to the Boone's Lick country, towards the centre of the present state. From the settlements of middle Tennessee a pioneer farming area reached southward to connect with the settlements of Mobile, and the latter became conterminus with those of the lower Mississippi.

By 1830 large portions of these Indian lands, which were ceded between 1817 and 1829, received the same type of colonization. The unoccupied lands in Indiana and Illinois were prairie country, then deemed unsuited for settlement because of the lack of wood and drinking
3589 water. It was the hard-woods that had been taken up in the northwest, and, for the most part, the tracts a little back from the unhealthful bottom lands, but in close proximity to the rivers, which were the only means of transportation before the building of good roads. A new island of settlement appeared in the northwestern portion of Illinois and the adjacent regions of Wisconsin and Iowa, due to the opening of the lead mines. Along the Missouri Valley and in the Gulf region the areas possessed in 1820 increased in density of population. Georgia spread her settlers into the Indian lands, which she had so recently secured by threatening a rupture with the United States."

At place in book to which my attention is called, page 70 of book, opposite page 70, are two maps. Legend on map at left hand sides states "Distribution of Population, 1820." (For copy of said map see Appendix, page) Blank

space represents unoccupied areas, lighter colored region would be from two to eighteen inhabitants to square mile, darker color indicates from eighteen to over ninety inhabitants to square mile. In state of Illinois population is indicated on map by lighter color, which indicates there were two to eighteen inhabitants to square mile in southern part of state, along Ohio, Mississippi and Wabash. Map shows above that region I have indicated no population; unoccupied area. Indicates in Northern Illinois Sacs and Fox Indians. That would be north of Illinois river. East of Illinois river would be Pottawattomie

Indians. Lighter shade, indicating from two to eighteen inhabitants to square mile, extends up Mississippi to fortieth parallel. Shows at junction of Missouri and Mississippi, the heavier shade, that is a population of from eighteen to over ninety inhabitants. It is a little space indicated just at juncture of rivers. Legend of map on right hand side of same page is "Distribution of Population, 1830." (For copy of said map see Appendix, page . . .) Remainder of table is same as one on right hand; white space for unoccupied spaces, etc. Population of Illinois in 1830 is shown by lighter colors in entire area where population exists; is given further up rivers; a little further up the Mississippi and the Illinois. It also shows slight population in extreme northwestern corner of Illinois. Rest of Illinois which would be northern part and eastern part or prairie land and upper part of Illinois river would be unoccupied area. Chicago is included in unoccupied area. Illinois river two-fifths of way from mouth. The map of 1820 shows population just started up from mouth of Illinois. It is at mouth. Map of 1830 does not show heavier shaded population at juncture of Missouri and Mississippi rivers.

Mr. WILKERSON. That is plainly a mistake. It occurs to me that failure to put heavy shaded portion there in vicinity of St. Louis was undoubtedly error of map-maker; we all know St. Louis at that time was considerable city; at juncture of Missouri and Mississippi. Ought to come where they have it on other map; evidently did not put in that little space.

Mr. SCOTT. By inference would think same thing.

The Indians on the 1830 map were located as they are on 1820 map.

3594 Page 80 of Turner's book throws light on the use of rivers in early settlement and as to manner in which the

settlers from the north as distinguished from those from the south, settlers from New York, New England, etc., came into this part of the country (reading):

3595 "The routes of travel to the western country were numerous. Prior to the opening of the Erie Canal the New England element either passed along the Mohawk and the Genesee turnpike to Lake Erie, or crossed the Hudson and followed the line of the Catskill turnpike to the headwaters of the Allegheny, or, by way of Boston, took ship to New York, Philadelphia, or Baltimore, in order to follow a more southerly route. In Pennsylvania the principal route was the old road which, in a general way, followed the line that Forbes had cut in the French and Indian War from Philadelphia to Pittsburg by way of Lancaster and Bedford. By this time the road had been made a turnpike through a large portion of its course. From Baltimore the Traveller followed a turnpike to Cumberland, on the Potomac, where began the old National Road across the mountains to Wheeling, on the Ohio, with branches leading to Pittsburg. This became one of the great arteries of western migration and commerce, connecting, as it did at its eastern end, with the Shenandoah Valley, and thus affording access to the Ohio for large areas of Virginia. Other roads lay through the passes of the Alleghanies, easily reached from the divide between the waters of North Carolina and of West Virginia. Saluda Gap, in northwestern South Carolina, led the way to the great valley of eastern Tennessee. In Tennessee and Kentucky many routes passed to the Ohio in the region of Cincinnati or Louisville.

When the settler arrived at the waters of the Ohio, he either took a steamboat or placed his possessions on a flatboat, or ark, and floated down the river to his destination. From the upper waters of the Allegheny many emigrants took advantage of the lumber-rafts, which were constructed from the pine forests of southwestern New York, to float to the Ohio with themselves and their belongings. With the advent of the steamboat these older modes of navigation were, to a considerable extent, superseded. But navigation on the Great Lakes had not sufficiently advanced to afford opportunity for any considerable movement of settlement, by this route, beyond Lake Erie."

Have completed passage. New chapter begins at page 85. (Reading first sentence of that chapter into record):

"Arrived at the nearest point to his destination on the Ohio, the emigrant either cut out a road to his new home or pushed up some tributary of that river in a keel-boat."

In "The Expansion of New England," written by Lois Kimball Mathews, instructor of history in Vassar College, I have a reference as to how New England settlers or colonists came to Illinois. (Reading from title page):

"The expansion of New England. The Spread of New England Settlement and Institutions to the Mississippi River. 1620-1865. By Lois Kimball Mathews, Instructor in History in Vassar College. Boston and New York. Houghton Mifflin Company. The Riverside Press, Cambridge, 1909."

Lois Kimball Mathews is on faculty of Vassar College and has written this work which has been favorably referred to by historians. Have two or three references. On page 206 read following (reading):

"The settlement of Illinois presents many features in common with that of its neighbor, Indiana. Settlers had worked up into Illinois from the South before 1812, as has been said; in 1818, when the territory became a state, only the southern half had as yet been occupied, and that portion wholly by representatives of Virginia, 3597 Kentucky and the Carolinas, whose influence dominated the territorial stage."

On page 209 have another reference. (Reading):

"A strong sectional antagonism sprang up, due to the entire misunderstanding existing between the northern and southern portions of the state. Southerners opposed the Illinois and Michigan Canal because of the fear that if completed it would 'flood the state with Yankees'; the Northerners resented the attempt to force them to help pay a heavy state debt which had been recklessly incurred before their arrival."

On page 213 I have following reference (reading):

"The Maine colony which settled at Rockton, Winnebago County, sent Ira Hersey in 1837 as their representative to visit Illinois and select a good tract of land. He was greatly impressed with the possibilities of the West, and on his return fired his neighbors with an especial enthusiasm for the beautiful Rock River val-

ley. The colony was formed, and with Mr. Hersey as their leader, they departed. They went from Portland to Boston; then to Providence by rail; by water to New York and Philadelphia; again by rail across Pennsylvania to Pittsburg, where they took passage down the Ohio River. In Cincinnati they purchased provisions and wagons, and continuing their way passed up the Mississippi, and up the Illinois as far as Ottawa, where
 3958 they bought oxen and cows. Then they finished their journey overland to their new home. In the same year was formed their Congregational church. There were at least twenty-two colonies in Illinois, all of which had their origin in New England or in New York, most of them planted between 1830 and 1840."

Returning to Turner, on page 98, reading reference throwing light upon question of use of rivers by early settlers. (Reading):

"Only a few villages lay along the Mississippi below St. Louis until the traveller reached New Orleans, the emporium of the whole Mississippi Valley. As yet the direct effect of the Erie Canal was chiefly limited to the state of New York. The great bulk of western exports passed down the tributaries of the Mississippi to this city, which was, therefore, the centre of foreign exports for the valley as well as the port from which the coast-wise trade in the products of the whole interior departed. In 1830 its population was nearly fifty thousand."

On page 77 of Turner find following indicating extent of New England population in Illinois in 1820 and 1830 (reading):

"Illinois in this period had but a sprinkling of New Englanders, engaged in business in the little towns."

3599 Legend on map my attention is called to in this same work between pages 226 and 227 is "Highways and Waterways in the United States, 1826-1830," based on H. S. Tanner's map of 1825. (For copy of said map see Appendix, page) Green straight line indicates canals; broken green, canals in progress; red line, roads; broken red line, roads in progress. Map does not indicate any roads north of line leading from mouth of Illinois river to point where Wabash becomes state line of Illinois on east. Does not indicate any roads between Lake Erie and Lake Huron and northern Illinois. As indicated by map, Cleveland is farthest road to west which touches Lake Erie. Road at St.

Louis and one running up to Indianapolis is nearest road of complete road highways as indicated on map to the point marked Fort Dearborn, and in parenthesis Chicago.

3600 The latter are, the road running up to Indianapolis from south is broken line. Old Cumberland road, which is continuous to Washington and other eastern cities connects with road leading to Indianapolis. There is no highway or waterway of the kind referred to in table, Canals, Canals in Progress, Roads, or Roads in Progress, leading to any point on Lake Michigan as shown on map. My attention is called to Gilbert Imlay, on title page of which volume appears, among other things, "Illustrated with Correct Maps of the Western Territory of North America; of the State of Kentucky, as divided into Counties, from Actual Surveys by Elihu Barker; a Map of the Tennessee Government; and a Plan of the Rapids of the Ohio," my attention being especially directed to the map of western part of the Territories belonging to United States of America, drawn from best authorities, engraved for Imlay's topographical description of that country, appearing in front of that volume (For copy of said map see Appendix, page); and to the lower portion of Lake Michigan and relation there shown of the Chicago river and Desplaines river to each other.

3601 I am sufficiently familiar with the topography of this country to say whether or not it is an accurate map of that particular region and I judge it is not an accurate

3602 map of that region. What I would judge to be Desplaines river has its source here south of South Branch of Chicago river, and it should be up along west side of Lake Michigan rising in southern part of what is now Wisconsin. Know general course of St. Joseph river in general way. As I understand, map is not correct in showing it as running east and then northeasterly, and terminating at point west of and little above Lake St. Clair. It rises too far north. St. Joseph

runs in general direction south. There is something 3603 in Schoolcraft which throws light upon whether or not the inference was when Schoolcraft and Kennedy abandoned the river at a certain point, to the effect that there was an obstruction at Vermillion river on account of which they abandoned it, which inference indicated nothing as to character of the Illinois above Vermillion river.

Mr. SCOTT. Am referring to something already in record; same thing you referred to, Mr. Wilkerson, in cross.

Mr. WILKERSON. Objected to as calling for conclusion of witness.

Page 2949 of transcript is reference to Schoolcraft's travels on page 318 of Schoolcraft, in which occurs following (reading):

3604 "The rapids commence half a mile above, which makes it evident that the Illinois is greatly diminished in size above the junction of the Vermillion. The water at once becomes shallow, and the rock, which is sandstone, presents itself first in broken masses, and soon after flooring the bed of the river. When our canoe would no longer float without rubbing against the rocks, we got out and made a short portage, the empty canoe being still guided along by men walking in the stream on each side. When we again embarked, we could, however, go but a short distance. Another portage was necessary. In short, we could no longer proceed in our water craft. Nothing but a series of rapids appeared above as far as we would explore. The water was scarcely eight or ten inches deep in any place, and often less than four."

Sentence following is (reading):

"With great exertions, we had proceeded two or three miles above the Vermillion, and about four o'clock we encamped near a remarkable isolated hill, called by French voyageurs Le Rocher, and Rock Fort."

Significance I draw from what have read is that he had gone as far as could with canoe, sent exploring expeditions up further when found could go no further and discovered could make no headway and had to give up journey by water and go overland. He was using a canoe. These canoes 3605 were often carried around obstructions as I understand. 3606 Have been impressed with fact that a very thorough examination has been made of all sources throwing light upon question of use made of this river. In my opinion as historical critic, general conclusions expressed by any historical writers as to use of this route prior to beginning of this litigation and opinions expressed prior to beginning of litigation would not be accepted as against deduction to be drawn by any intelligent reader and trained mind, from detailed evidence in this case.

Mr. CORNEUA. Objected to as incompetent, irrelevant, immaterial re-direct and that witness has not qualified as an expert.

Mr. CRESSY. On further ground that no foundation been laid for question, and that question itself is leading.

3607 Mr. SCOTT. Q. You were asked this question on cross, referring to your classification of persons speaking of this river, including Charlevoix in a certain class, "Did you have in mind at the time you made this classification that one reading your analysis there would give greater weight to Charlevoix's characterization of the Desplaines as a mere brook than they would have given it if you had put him in the third or fourth class where he belonged." Will ask you, whether, in your judgment, if it appeared that Dr. Thwaites on direct in this case, "To be more specific, these contemporary documents may in such a case as is before us be letters, diaries, journals, or memoranda, written by men who had traversed the Chicago-Desplaines fur trade route; or books written or printed by them about it. This is what we call primary original material, and under this head may be placed such documents or writings as books by Marquette, La Salle, St. Cosme, Charlevoix, Heward, Schoolcraft and others." I ask if in your judgment, if Dr. Thwaites so testified it would be fair inference or just imputation upon him that he placed Charlevoix in the class of these who had used Chicago-Desplaines fur trade route in order that greater weight should be given to his characterization of Desplaines than would have been given if it had been put in class of those who had not used Desplaines river? I ask you that as historical critic.

3608 Mr. CORNEAU. Objected to as calling upon witness for conclusion which is not one of historical nature, but one courts will have to determine. Further that there is no foundation for question in record and that it is leading.

A. Why, I should think not.

Mr. SCOTT. Q. Referring to Long's statement that there were riffles and rapids in Desplaines which appeared only at low water, that it was a chain of stagnant pools, that in dryest seasons portage was seldom more than three miles, that there were formidable rapids at mouth of Vermillion utterly impassible for boats except in high water. Assuming there was fall of more than sixty feet in Desplaines river between Romeo and mouth of river, distance of about twenty miles, in which there were rapids at all seasons of year far more formidable than those at the Vermillion at any season of year; assume from other evidence it appears that portages from Chicago to below Ottawa were at times necessary, what would you say as to Long, as to whether or not

he was an accurate, careful observer, basing your conclusion upon these statements?

3610 Mr. CORNEAU. Objected to as irrelevant, incompetent and immaterial; that its subject matter is not one for expert testimony; that there is no foundation for first part of question in record, or for any part of question and that it incorrectly states what record shows.

Mr. SCOTT. Counsel then asks counsel for government to point out where it is incorrect.

Mr. CRESSY. Will say question says report states there are rapids at mouth of Vermillion passable only in times of high water. Report states "At the mouth of the Vermillion there are rapids, perceivable only in the lower stages of winter."

Mr. SCOTT. I did not refer to report; I said statement of Long in reference to Vermillion, which is at page 214 of Expedition to the Source of the St. Peter's, where he says: "The most formidable obstructions of this nature are the rapids situated at the confluence of the Vermillion which are utterly impassible for boats except in times of flood." If there are no further corrections, he may answer question.

3611 Mr. CRESSY. Let objections stand as put.

A. Should judge he was an inaccurate observer.

3612 *Re-cross Examination by Mr. Wilkerson.*

In my testimony have had in mind date of Perrault's trip to Cahokia. Believe it was in 1783. 1782 is not my recollection. 1782 or 1783, yes. When question was asked me 3613 by Mr. Scott on page 3544, "Referring now to page 3097 of the cross-examination, were you asked in the examination concerning the editorial in the St. Louis paper, and with special reference to Perrault being at Cahokia and French traders being there, in regard to the inference to be drawn as to trade by way of the Illinois and the Lakes," and when I answered his next question as to whether there was anything to throw light on the course the trade of the French from Cahokia and vicinity took during period in question, do not know as I fixed it at any definite short period. As to whether I had in mind the period from 1782 to 1783, the time of Perrault's trip to Cahokia, and 1817 to 1819, the time when editorial was written, will say I do not know that I did fix them definitely. Had in mind what sources would throw light on movement of trade during general period which we had been dis-

cussing just before. Do not know whether definitely thought of exact dates Perrault was in Cahokia and editorial in 3614 St. Louis paper, or not. Had in mind whole general period when said had two or three references on that point; some of references were from earlier period than 1783; most of them were. As to whether that included period from 1782 to 1817, will say I do not know that I fixed period definitely in my mind. Was reading those extracts to throw light upon general movement of trade during that general period. Had made investigation of that subject and read those extracts for purpose of throwing light on course of trade from Cahokia and vicinity during period generally. Have fixed time when Du Pratz was 3615 in Louisiana. He says in preface he lived in colony in Louisiana until 1734; that he kept in touch with colony until 1757, time of writing book. First French edition was published either in 1757 or 1758. He was in Louisiana sixteen years, I believe, until 1734. In my opinion there is nothing inconsistent in quotation from Du Pratz, appearing at bottom of page 3544, with Perrault's statement that he found Canadian traders in Cahokia in 1782. Have looked at map in volume of Du Pratz I produced. Think Du Pratz had in mind Miami river when he spoke of route traveled by people 3616 coming to Illinois river points. Portion of map attention is directed to, has marked at the place between Chicago and Desplaines, the words "Carrying Place," in same way in which words "Carrying Place" are indicated upon other rivers, Ohio and river of the Miami; word "carrying place," being in italics and being little fine broken line on map. See nothing in this extract to indicate that Du Pratz had in mind at all this Desplaines-Illinois routes as one of routes that was traveled by people coming down into this part of country. Map in book indicates there was carrying 3617 place at point indicated. My view as historical critic of words "carrying place," is that they indicate that map maker thought there was a route for trade. Don't know as would necessarily mean route of trade; would mean a passage; might or might not be route of trade; route that was used by somebody or something. Understood Ojibwa, place referred to in first sentence on page 497 of Imlay's America, 1797 edition (Trans., 3546), being passage from Hutch- 3618 ins' Topographical Description of Virginia, is on Wabash river, as stated there. Located place other day.

Book from which got information was book of Chicago Historical Library, which told me something of general location of it. If you should say it was forty miles above Vincennes, don't know as would want to fix it from memory; don't know just where it is. Do not see exactly why location of that place would have anything to do with interpretation to be placed upon that passage, since it was along the Wabash and since it indicates that trade moved down that general route from Canada. When was speaking of trade conditions in reference to time of Benton editorial in 1817 or 1819 and Per-

3619 rault's trip to Cahokia in 1782, I found this excerpt in Hutchins' Topographical description. This would throw light on period of which Hutchins was writing; that would be an earlier period than 1819, time of Benton's editorial as to extent of trade down Illinois river in 1817, or such period prior thereto as Benton might have had in mind, remembering date St. Louis was established was 1764. Hutchins was published in 1778. We know Hutchins lived in Illinois in years just previous to 1778, which would throw some light on question of when he collected information upon which description was based. Lived in Illinois previous to 1770 or 1771. Don't remember date exactly he left Illinois. Possibly left that part of country shortly after 1770. Don't remember

3020 that fact as to just when he left Illinois was brought out. Would probably throw light with reference to trade conditions prior and about that time; time of which Hutchins wrote. In the reference on page 3547 of record to Coxe's Carolana, I understood term Carolana refers to large area, including this whole section of Mississippi valley. Cannot from my notes here fix boundaries of territory with reference to which Coxe was referring to by term Carolana; remember he fixes boundary. If can have volume think could give Coxe's boundaries. As he points out, "it is 31 degrees on the south, 36 degrees north, and in longitude from the western or Atlantic Ocean unto Mexico, now in possession of the Spaniards, which is in a direct line above one thousand miles, and where not inhabited by them, unto the South Sea." Original

3621 name "Carolana" came from the King of France, later, when it came in charge of England, name was given to country in honor of Charles, King of England, Coxe points out that Carolana and the Carolinas are two distinct, though bordering provinces. Am not sure concerning history

3622 of Province of Carolana. Thought Coxe was in this general valley, Carolana. Think was in this country in

1698; noticed in print other day some place, 1598, probably misprint, as he was physician to King Charles Second, I believe. Notes taken from this expedition was one 3623 source of his information. In investigation of sources of information on which book was based, to determine degree of credibility to be given book, ascertained notes taken of trip was one source of information. Book was written by man named Coxe. He states in book was based on notes taken by Dr. Coxe. Would not want to state positively he was not in country at all, the Coxe who wrote book. Man who wrote book, Coxe, man who made notes on which book was based, is man spoken of as having made this expedition. Not sure just exactly where expedition went; into Mississippi valley this says. From note in his book could not make statement Dr. Coxe was party to that expedition. Some place have seen he was; cannot cite exact authority.

Thought Dr. Coxe accompanied expedition; but do not 3624 know. Do not know that Dr. Coxe drew a memorial to King in 1699, and that this book cited is substantially a reproduction of that memorial; it may be. Have no knowledge on that subject. Am not sure Coxe expedition ever got out of present site of New Orleans; says they sailed up Mississippi. Don't know how far they sailed. Possibly critical analysis of book would show Dr. Coxe was never in part of country described in book, and that expedition never got above present site of New Orleans. Have made no such critical analysis. Passage cited from Coxe's Carolana is quotation from Coxe; critical analysis would have to be made of book to see if was stating facts cor- 3625 rectly or not. Don't know if there is anything in his statement of fact that would justify forming conclusion about trade in this part of country taken alone because don't know whether he actually passed into this country. Presume he would know general route. Would not think would know in detail but probably would know of general route that was taken. Have not seen notes of party in command of vessel used on expedition referred to. Passage I put in record on page 3548 (Abst., 1342), refers to period previous to 1722; whether would refer to period prior to 1699 would not know until had investigated further.

Mr. WILKERSON. Am taking up Carter now.

Whereupon, upon the request of counsel for defendant, the witness read into record the following excerpts (note 30 on page 87):

3626 "Gordon's 'Journal down the Ohio,' 1766, M. S., in Hist. Soc. Pa. Library, Lieutenant Geo. Phyn to Johnson, April 15, 1768, John MSS., vol. XXV, No. 109, Morgan complained in 1767 that the great number of French hunters who went up the Ohio from New Orleans had almost exterminated the buffalo. Morgan to Baynton and Wharton, December 10, 1767, Morgan's MS. letter book."

Note 47 on page 92 (reading):

"Gage to Shelburne, February 22, 1767, B. T. Papers (Hist. Soc. Pa.) Vol. XXVII, Lieutenant-Governor Carlton of Canada complained that owing to the restraints on the fur trade in that colony, all of the trade was going down the Mississippi. Carlton to Johnson, March 27, 1767, Mich. Pioneer and Hist. Colls. X, 222-224."

Pursuant to request by counsel for complainant I read first paragraph of prize essay by Clarence Edwin Carter, entitled "The Illinois Country," to which he directs my attention:

3627 "In the present study my researches have been directed toward the discovery of the legal, political, and economic relations between Great Britain and the Illinois colony, and the political events in Illinois which illustrate some of those general relations. In addition to the Illinois settlement, the great West which was ceded to England in 1763, included other colonies of comparatively equal importance, the chief of which was Detroit. Whatever general principles, therefore, are ascertained with reference to the relations between the home government and the Illinois French apply equally to the whole West. In the discussion of the illustrative events, however, I have followed their course in Illinois alone."

Have made no further exhaustive investigation with reference to trade conditions and the course of commerce in
3628 territory along Illinois river and above St. Louis prior to 1763. I quoted from chapter five of Carter, who speaks of trade conditions in Illinois country. Du Pratz speaks of territory of Louisiana and coming by way of the Miamis, which would be coming by road east of Illinois country, to Louisiana. Without regard to route, passage does not necessarily show that there was trade between that country and Canada. He speaks of them coming by way of the Wabash; then he says: "From thence the Canadians go down that

river, into the Wabache, and at last the Mississippi, which brings them to New Orleans, the capital of Louisiana." The passage from page 182 of Du Pratz, on page 3545 of record, (Abst., 1341), beginning:

"In those countries there is a river, which takes its name from the Illinois. It was by this river that the first traveler came from Canada into the Mississippi. Such as come from Canada, and have business only on the Illinois, pass that way yet; but such as want to go directly to the sea, go down the river of the Miamie into the Wabache, or Ohio and from thence into the Missis-

3629 sippi,"

would indicate that some came from Canada and had business in Illinois. Would probably indicate that during period about which Du Pratz was writing and prior to 1763, the commencing of period which Carter discussed, there was some trade between Canada and Illinois country. He says, "Such as come from Canada and have business only on the Illinois, pass that way yet." Turning to page 3550 of record, the first passage from Carter, from page 11, my attention is directed to first sentence of second paragraph of preface as follows: "In chapters I and III, both of which are in a sense introductory, no serious attempt has been made at original investigation." In view of that statement in preface would give considerable weight to passage from chapter one which I read into record in the face of the 3630 statement in preface, because he is simply stating the conditions there, based on general knowledge, written no doubt after making original study. Am not sure concerning general conditions he found existing. He cites not unused manuscript as he says, he used in chapters 4 and 7, but Winsor, who is a critical authority. After reading and carefully analyzing chapter would state it in his language that all of fur trade in lower Illinois region went to Louisiana. Am referring to page 11 (reading): "All of the trade of the upper Mississippi valley was carried on through New Orleans, and the southern colony often owed its existence to the large supplies of flour and pork sent down the river." It don't say particularly fur trade, don't particularly specify, but says, "All of the trade of the upper Mississippi valley," which, presume, would include fur trade. Last part of it, "Although the inhabitants occupied themselves chiefly with hunting 3631 and with trading with the Indians, they yet raised a considerable amount of corn, wheat, and various kinds

of fruit, which, together with cattle and hogs they frequently shipped to the New Orleans market" would mean that they sent the rest of their trade down that way, also, other than fur, which you have specified. Have read first, the sentence of second paragraph of Carter before I quoted that passage as authority. In this prize essay of Carter's he aims to state stress of this work, and that part which is based on research from hitherto unused manuscripts, manuscript material, is that part between chapters four and seven inclusive, and that the other part is not based upon hitherto unused manuscripts, but no doubt it is a careful piece of work. In general way am familiar enough with general historical situation at that time to reach conclusion as historical critic as to why Carter carved out epoch from 1763 to 1774 as a separate historical period. Do not know as would say am familiar with detailed history of the country. Would say he tried to make separate period from 1763 to 1774 of Illinois country because in 1763 this territory concerning which he writes was turned over to the English; political sovereignty changed. They also wanted to change economic dependency or relations, so that in that period there commences competition between French and English that was not found before. Had in mind, when spoke of economic situation, that the French had been carrying on the trade and had almost complete monopoly of this whole fur region, including not only Illinois but whole Mississippi Valley; but when this territory passed into hands of English they wanted to get not only political dependence but economic dependence on England. Judging from specific attempt as brought out in this study, it was to give such companies as Morgan represented, and two or three others located at Pittsburg and Philadelphia, and that would be part of continent they would be trying to make the Illinois dependent upon. I know there were other companies they were interested in diverting business to; know in general way that this whole western part of country, by which I mean territory between Alleghanies and Mississippi, was dependent upon Mississippi valley as an outlet. England and United States tried to change that, after 1783. By that I mean direction of trade. That was reason United States purchased Louisiana territory in 1805; so as to control Mississippi river and its mouth. Jefferson said country that owned New Orleans was a natural enemy of this country. Know there was some references

I have found to companies that carried on trade with Montreal and Quebec, points mentioned by you when asking me if trade conditions there had anything to do with what was done during period from 1763 to 1774, looking toward modification of economic conditions. In getting at significance and weight to be given statements of Carter upon point cited for, I simply cited him as an authority, a man who from 3635 study of original manuscript, states his conclusions and cites his authorities. Would cite him as to 1763 to 1774. Believe have cited other statements he made in connection with that period. Most of authorities he cites I have not seen because they are in original manuscript, unpublished, and I did not get them. He made 1774 end of epoch because 1774 was beginning of American Revolution and trouble with Colonies, between them and mother country, and economic conditions between 1774 and 1776 would be somewhat disturbed.

Q. Are we accustomed to fix date of American Revolution as 1774?

Mr. SCOTT. Objected to; he did not say that.

A. Certainly no historian I know of would set arbitrary date as commencement of that trouble. In one course I had we took the preliminaries of American Revolution and went back as early as 1761. It had occurred to me that reason Carter named 1774 as end of this epoch was that Quebec Act was passed in 1774. That was probably one of things that entered in. It wasn't wholly trade act that brought about passage of Quebec Act of 1774. Don't know why you 3637 called it Quebec Act. I know act referred to as such.

Have had that act in mind, thought of it in connection with this subject. Don't know as thought of it as being reason for doubting truth of Carter's statement. Don't know whether I read paragraph at conclusion of Carter's Essay:

"In 1774 came the opportunity to make a final disposition of the Illinois French. During the period under consideration events had so shaped themselves in the neighboring colony of Canada that the ministry was under the necessity of reorganizing the government of that province. The proclamation of 1763 had extended English law to Canada with the result that the French inhabitants were subjected to many hardships. Their grievances were now to be taken into consideration by the government, and as the solution of the western and Canadian problems seemed to be closely connected,

the two questions were taken up at the same time. General Gage was summoned home in 1773, and was directed to bring with him every paper relating to the West which might tend to 'explain as well the causes as the effects' of the abuses and disorders in Illinois. As a
 5638 result of his recommendations and of the investigations of the ministry the Quebec Act of 1774 was enacted, according to the provisions of which the entire Northwest was included within the limits of the province of Quebec."

Think I knew all facts stated there. Shows what Carter had in mind in fixing end of epoch about which he wrote was the distinctively English period, because after 1774 that territory was included, the territory of Illinois was attached to Canada. Think I have not read General Gage's report of March 20, 1762. My attention is directed to General Gage's re-
 3639 port of the State of the Government of Montreal, March 20, 1762, found in volume "Canadian Archives, Documents Relating to The Constitutional, History of Canada, 1759-1791, Selected and Edited with Notes by Adam Shortt, Professor Political Science Queen's University and Arthur G. Doughty, Dominion Archivist, Printed by Order of Parliament. Ottawa. Printed by S. E. Dawson, Printed to the King's Most Excellent Majesty, 1907. Sessional paper No. 18," I will read two paragraphs on page 72 (reading):

"As I cannot discover that the Limits betwixt Louisiana & Canada, were distinctly described so as to be Publicly known, I can only inform you, what were generally believed here, to have been the Boundaries of Canada & give you my own Opinion, which is drawn from the Trade that has been Constantly carried on, by the Canadians, under the Authority, and permission of their several Governors. From hence I judge, not only the Lake, which are Indisputable, but the whole Course of the Mississippi from its Heads to it's Junction with the Illinois, to have been comprehended by the French, in the Government of Canada.

The People of Louisiana carry their Trade up the Missouri River, and I can't find that the Traders from that
 3640 Province, ever went higher up the Mississippi than the mouth of the Illinois River, on the Contrary, the Traders from Canada, did constantly trade above the Illinois, from their Posts on Lake Michigan, even up to the river St. Croix, and the Falls of St. Anthony. And it

was the Trade alone of the Mississippi Indians, which made the Post of the Baye des Puants, so very advantageous. The Illinois River, tho' formerly in the District of Canada, was, after some Disputes betwixt the Governor, annexed to Louisiana. A South Easterly Line, drawn from the portage betwixt the Illinois River and the waters which run into Lake Michigan will bring you to the post of Houliatanon upon the Ouabaches fourscore leagues down that river; Computing from that part, where the Boats are Launched, after crossing the Portage of the Miamis. This was the last Trading Post belonging to Canada on that side & was certainly the boundary of Canada on that side. About sixty Leagues below this Post, is the Post of Vincennes, which was served by the Traders of Louisiana, and of Course, was the Boundary of that Province. This is the best information I can procure you concerning the limits, and what I have described to you, are thought to be the real Boundaries betwixt the two Provinces."

Have read passage from Gage quoted by Carter to
3641 which attention is directed, on page 3558 (Abst., 1348) of testimony. Believe I cited some authority to show what was meant there by Gage's reference to trade of the Mississippi, "Except that of the upper parts, from which a portion may go to Quebec." I put in at page 3561 of record (Abst., 1349) a memorial of man by name of Morgan.

Q. I called your attention to page 3558 of record; then I read from Gage's report; then called your attention to what you put on in page 3561 as indicating what Gage meant by trade of upper Mississippi. I ask whether, having read that, you are still prepared to say when he referred to trade of upper Mississippi, he meant trade from far north and not trade described by him in report you have before you?

Mr. SCOTT. Objection; no statement of witness on re-
3642 direct justifying question; is predicated upon assumed testimony not appearing in his evidence.

Mr. WILKERSON. In view of objection I direct attention to question of counsel on page 3559 where he asked witness if he found anything as to how furs in upper part of Mississippi went to Quebec, and ask whether counsel had in mind that question that upper part of Mississippi which Gage referred to, was same part of upper Mississippi, referred to in Morgan memorial.

Mr. SCOTT. It appeared in Gage's report. He spoke of "upper parts from whence a portion may go to Quebec." He did not define upper parts. I asked witness whether excerpt in memorial threw any light as to how furs in upper part of Mississippi went to Quebec, which was general statement as to upper part of Mississippi and did not define any limits.

3643 The WITNESS (continuing): As historical critic should try, if possible, to find what Gage meant by term "Upper part of Mississippi." Have not done that yet. When Gage says "A South Easterly Line, drawn from the portage, betwixt the Illinois river and the waters which run into Lake Michigan will bring you to the post of Houiliatanon upon the Oubaches fourscore Leagues down that River, Computing from that part, where the Boats are Launched, after crossing the Portage of the Miamis," it seemed to me he meant that was the boundary line; am not sure it is. I put in another passage showing course of trade from sources

3644 of Mississippi without going to Gage to find what Gage meant when he spoke of trade of upper Mississippi.

With reference to question at page 3544 of record, dealing with period in question, the period including Perrault's trip to Cahokia and Benton editorial, I have made no extensive investigation with historical works dealing with time subsequent to 1774 for purpose of determining direction of commerce from the Illinois river, or for purpose of determining whether there was any change in trade and conditions from those existing in period from 1763 to 1774.

3645 When testifying about course of trade, as I said before, do not know that I fixed definite date. Simply cited those excerpts to point out movement of trade in that general period Carter dealt primarily with period from 1763 to 1774. Cited other reference to earlier period. DuPratz dealt with period about 1757 and Coxe evidently before 1722. Hutchins would be just about that time. Hutchins was there after 1770. Page 111 of Canadian Archives, to which my attention is directed, paragraph No. 2nd is paragraph of document which is a report dated in 1763 sent to Lords of Trade, and seems to deal with trade conditions in Canada. (Reading paragraph):

"We are apprehensive as to the whole of this country would become subject to the Laws of a particular Government of Province, it would give that Province such superior advantage in respect to the whole of the Indian Trade, which Your Majesty in Your Justice and Wis-

dom has determined to leave as open as possible, to all of Your Subjects, as might control and obstruct it to the Prejudice of Your other colonies."

3647 After reading paragraph in this Canadian Archives, commencing on page 357, entitled "A Memorial of the Foregoing French Petitioners in Support of their Petitions," particularly to paragraph on 358, as follows:

"We desire, therefore, that, as under the French government our colony was permitted to extend over all the upper countries known under the names of Michillimakinac, Detroit, and other adjacent places, as far as the River Mississippi, so it may not be enlarged to the same extent. And this re-annexation of these inland posts to this province is the more necessary on account of the fur trade which the people of this province carry on to them; because, in the present state of things, as there are no courts of justice whose jurisdiction extends to those distant places, those of the factors we send to them with our goods to trade with the Indians for
3648 their furs who happen to prove dishonest continue in them out of the reach of their creditors, and live upon the profits of the goods entrusted to their care; which entirely ruins this colony, and turns these posts into harbours for rogues and vagabonds whose wicked and violent conduct is often likely to give rise to war with the Indians,"

which is under date of 1774, am not sure am clear what is desired. It would indicate it seems to me that they were willing to extend the boundary line, political boundary line so as to include the territory. From footnote at bottom of page 357, it seems to me purpose would be to serve as means of placing in their hands a monopoly of trade with western Indians. They were wanting to extend their political rights in order to gain monopoly of fur trade. Have turned to
3649 page 381 of same volume. Have read last paragraph on that page, which appears in Sessional Paper No. 18. Heading of document is "Proposed Extension of Provisional Limits." Will read portion of footnote 1 at bottom of page 381 (reading):

"The boundary line, as here proposed indicates the limits within which it was desired to confine the English colonies."

Document says:

“No clue is given as to author of this proposal, but as may be observed from a letter of Dartmouth to Cramahe of Dec. 1st, 1773 (see p. 388), this extension of the limits of the province, like the establishment of the Roman Catholic religion, was represented as a direct concession to the Canadian noblesse and clergy in response to their petition. For other features of the policy which harmonized with this, see note 4 below, & note 1, p. 389.”
 3650 (Reading footnote No. 4):

“In addition to the statements made in such letters as that of Dartmouth to Cramahe of Dec. 1st, 1773 (see p. 388) we find the statement of Wm. Knox, the Colonial Under Secretary, after the Quebec Act was passed, that the whole of the derelict country, is, by the first clause of the Act, put under the jurisdiction of the government of Quebec, with the avowed purpose of excluding all further settlement therein, and for the establishment of uniform regulations for the Indian trade.” “The justice and policy of the late Act” &c. p. 20. See also note 1, p. 389.”

Dartmouth was under secretary of the colony; do not see exact title held indicated. I understand he was secretary of state for colonies; am not sure whether he was at this particular time or not. Cramahe, other gentleman referred
 3651 to, may have been acting lieutenant governor; don't know who he was.

(Reading last paragraph on page 381):

“In order therefore to obviate the dangers and disadvantages arising from the present defective state of the interior country. To give force and effect to the power and authority of the crown within it. To give scope to the many commercial advantages which may be derived from it, to extend the benefits of civil government to the settlements of Canadian subjects that have been formed in the different parts of it, and to give stability and advantage to the sedentary fisheries on the north side of the Gulf of St. Lawrence, it is proposed that the—”

Am reading from “The Quebec Act, Anno Decimo Quarto. George II Regis. Cap. LXXXIII.” Don't find boundaries, stated in brief, of territory annexed to Quebec Act. Un-
 3652 derstand all territory north of Ohio and east of Mississippi was included in Quebec Act. I know Cavendish's

Debates on the bill for the government of Quebec, pages 9 and 10, being directed to my attention. I know of the book. Never used it. Don't know standing and reputation. Judging
3653 from title page it is book of standing. Have not used it myself (reading title page):

"Government of Canada. Debates of the House of Commons, in the year 1774, on the Bill for making more effectual provision for the Government of the Province of Quebec. Drawn up from the notes of the Right Honorable Sir Henry Cavendish, Bart, Member for Lostwithiel; now first published by J. Wright, editor of the Parliamentary History, etc., with a map of Canada, copied from the second edition of Mitchell's Map of North America, referred to in the debates. London: Ridgway, Piccadilly."

With above in mind would judge it as book known to historians; to which they went for material. Not knowing it myself, would not want to pronounce opinion on it. Have not worked great deal on Canadian history. Presume it
3654 would be referred to a great deal in connection with Canadian history and some American.

(Reading pp. 9-10):

"The first thing objected to by the honorable gentleman is, the very great extent of territory given to the province. Why, he asks, is it so extensive? There are added, undoubtedly, to it two countries which were not in the original limits of Canada, as settled in the proclamation of 1763; one, the Labrador coast, the other, the country westward of the Ohio and the Mississippi, and a few scattered posts to the west. - Sir, the addition of the Labrador coast has been made in consequence of information received from those best acquainted with Canada, best acquainted with the fishery upon that coast, who deem it absolutely necessary for the preservation of that fishery, that the Labrador coast should no longer be considered as part of the government of New York, but be annexed to that country. With respect to the other additions, three questions very fairly occur. It is well known, that settlers are in the habit of going to the interior parts from time to time. Now, however undesirable, it is open to Parliament to consider, whether it is fit that there should be no government in the country,
3655 or, on the contrary, separate and distinct governments; or whether the scattered posts should be annexed to Can-

ada. The House of Lords have thought proper to annex them to Canada; but when we consider that there must be some government, and that it is the desire of all those who trade from Canada to those countries, that there should be some government, my opinion is, that if gentlemen will weigh the inconveniences of separate governments, they will think the least inconvenient method is to annex those spots, though few in population great in extent of territory, rather than to leave them without government at all, or make them separate ones. Sir, the annexation likewise is the result of the desire of the Canadians, and of those who trade to those settlements, who think they cannot trade with safety as long as they remain separate."

My attention is directed to volume 1 of the bulletin of the University of Wisconsin, and to portion entitled:

"The Province of Quebec and the Early American Revolution, a Study in English-American Colonial History by Victor Victor Coffin, Ph. D., Assistant Professor of European History in University of Wisconsin. Published by Authority of Law and with the Approval of the Regents of the University. Madison, Wis., Published by the University, June, 1896."

I will say I know some of the publications in bulletin of University of Wisconsin.

Q. I direct your attention to page 419, "And having reached this conclusion it was almost inevitable that the Imperial authorities should choose for this purpose the province with which the region had been earliest and most closely associated, and to which it was believed by so many to belong,—that of Quebec," and ask you to state if that refers to this Quebec Act?

Mr. SCOTT. Objection; it says so.

Mr. WILKERSON. It does not refer to act specifically. It refers to Province of Quebec.

A. Would judge that it refers to province of Quebec.
3657 Writer referred to in paragraph commencing at bottom of page 428, ending bottom page 430, is William Knox, as examination of footnote 3 on page 429 reveals.

(Reading footnote 3):

"The justice and policy of the late Act of Parliament for making some effectual provisions for the Government of the Province of Quebec asserted and proved; and the conduct of Administration respecting that Prov-

ince stated and vindicated.' By Wm. Knox. Lond. 1774. Though unable to prove it I believe this to have been inspired."

I did not say I was familiar with Coffin. I am not. As to whether it is a document referred to by historians as a source of material, after reading from volume of Carter, "Victor Coffin, The Province of Quebec and the Early American Revolution; A study in English-American Colonial History. University of Wisconsin Bulletin Volume No. 3. Madison, 3658 1896. Based on Manuscript as well as printed sources.

Useful for discussion of western land policy of Great Britain. Some of the conclusions reached, however, need revision," my recollection is not refreshed.

(Reading paragraph):

3659 "A very notable pamphleteer of the year 1774 forcibly sums up this matter. After stating that the proclamation of 1763 was intended to be followed up a general plan of regulation for the Indian trade, he affirms (as noted above), that the events of the year following proved fatal to the doing of this, as it was not thought expedient to lay that tax upon the trade by which the expense was to be deferred. 'This was the reason that so large a part of the ceded territory in America was left without government, and that the new province of Quebec contained so small a portion of ancient Canada.' The small French settlements in the region, he continues, were left under the military government of the posts 'as most likely to prevent an increase of inhabitants.' But in the parts contiguous to the old colonies immigrants flocked in and forced the Indians to fall back; and as these new settlements were without civil jurisdiction and were every day increasing, 'the case was judged to be without other remedy than that of following the emigrants with government and erecting a new province between the Allegheny mountains and the river Ohio for that purpose.' But to prevent a recurrence of the necessity it was resolved (and done by the Quebec Act), to put the whole remaining region under the jurisdiction of the Government of Quebec, 'with the avowed purpose of excluding all further settlement therein, and for the establishment of uniform regulation for the Indian trade.' The Province of Quebec was preferred, 'because the access by water is much easier from Quebec to such parts of this country as are the most likely to be intruded upon

than from any other colony.' Only under one uniform government could the Indian be protected, and thus be prevented 'the quarrels and murders which are every day happening and which are the certain consequence of a fraudulent commerce.' There seems no reason to doubt the substantial correctness of these assertions; especially when we find the Government despatching to Carleton with his new commission in 1775, as a guide in his dealings with the Indians and the western trade, the identical regulations, which had been drawn up by the Board of trade in 1764."

(Reading paragraph beginning in middle of page 431):

3660 "But while defendant the originators of the Quebec Act from the heavier reproach brought against them on this point, I do not wish to be understood as in the least defending the western policy of the measure in itself. Disastrous as the Quebec Act proved, no part of it I think was more shortsighted or more disastrous than this treatment of the western lands. Following up the proclamation of 1763, it seemed an attempt to definitely maintain in the great heart of the continent, when apparently thrown open for Anglo-American expansion, the policy of monopoly and restriction against which the colonies on the coast were chafing so sorely. It was natural that the latter should imagine themselves threatened and impeded more malignly and seriously than could have been proven to be the case; it was on this side, I have little doubt, that the Quebec Act figured more prominently amongst the colonial grievances. Great Britain might well seem to have become 'the most active foe of the English race in America.' In this light I am inclined to emphasize strongly the importance of the Act in alarming and embittering the colonists."

I know volume 2 of Collections of the Illinois State Historical Library. Have used it some. It is edited by Mr. Alvord. Book is of known standing and accuracy among historical students. In reference standing of Coffin, see here reference 3661 once Mr. Carter makes, saying some of conclusions reached need revision. My attention is directed to page XVII of Illinois Historical Collection, and following paragraph.

"Most of the French of the western posts came from Canada, with which country they retained constant communication through trade and exchange of messages

on family affairs. Very few had come directly from France and the number from southern Louisiana was relatively small. Here in Illinois and on the Wabash which under both the French and British regime were subject to the same jurisdiction, they had lived for one or two generations, engaged in the pursuits of trade and the cultivation of their small farms."

Will say am not sure whether have read extract or not; I think I have; in same book am referred to the census 3662 Cahokia on page 624 and to footnote with reference to where inhabitants came from, which indicates that two or three families were connected in some way with families in Canada, but it seems that the editor is not clear on the direct connection between Canada and Cahokia. In general way have passed down over all notes; in cursory way. Think true there were large numbers living in those towns that came from Canada.

Q. On pages 624 to 632 there are a large number of notes, and I was trying to avoid putting all that in the record if I could have you examine that and indicate whether all those notes do not show that practically all those people came from Canada. If you will run through there you will see that the great majority of them are put down as having come from Canada. If you cannot agree with that as a historical expert, we will have them all read into the record.

A. Those footnotes indicate that the residents in Cahokia came from Canada.

Volume 5 of Illinois Historical Collection is one of 3663 books believe I used. Examination of footnotes in connection with census appearing on pages 414 to 423 of Kaskaskia shows evidently quite number of inhabitants of Kaskaskia came from Canada.

Whereupon counsel for complainant read and directed the attention of the witness to volume 2, page XXVII, which is as follows:

"The foregoing description of conditions in British Illinois would be far from complete without an account of one very important element of the society. No sooner had the news gone forth that the land to the north of the Ohio river had been ceded to England by the French than the merchants of the seaboard colonies began to compete for the fur trade of the region in a way that had been impossible hitherto. Up to this time the principal trade in the Illinois had been conducted by Canadian and

Louisiana merchants, the English colonists having found their way north of the Ohio only just previous to the outbreak of the last war."

Page XXIX:

- 3664 "In the first years of the British rule it looked as if the Ohio river would become the great trade route of the region and supplant the older and, with the French, more popular waterways to New Orleans and Canada. Even the British government seems to have approved at first this attempt to turn aside the trade from its older channels, for in 1769 the colonial governments were empowered to appoint officers to superintend the Indian trade, and Fort Pitt and the Illinois were assigned to Pennsylvania. Thus the Indians north of the Ohio became accustomed to Fort Pitt as the seat of authority in matters in which they were vitally interested."

Especially to "In the first years of the British rule it looked as if the Ohio river would become the great trade route of the region and supplant the older and, with the French, more popular waterways, to New Orleans and Canada."

- 3665 On page CXXIII:

"Affairs were further complicated by the presence of British merchants, who had rushed into the region to capture the Indian trade. The Michillimackinac company, which had a store at Cahokia, was particularly conspicuous in this competition. The British were able to undersell the inhabitants in their commerce with the Indians and, since this deprived the villagers of a trade which they thought rightfully belonged to them, it was the cause of several complaints. All the British who appeared in the west were not simply traders. The British government, which looked with covetous eyes on these rich lands, sent agents into all parts to report on the disposition of the people. Some of these, although not authorized by their government, openly urged the French people to unite with England, an issue out of their troubles which would not have been altogether unacceptable to the Illinoisans."

And to passage from the same volume 2 of Illinois Historical Collections, page CXLVII:

- 3666 "We have seen that the Kaskaskians complained of the establishment of the Michillimackinac company at Cahokia. From the year 1773 many British merchants

found their way to Illinois and established stores in the village. Among the names which occur are J. B. Perrault, representing Marchisseaux of Montreal, James Grant, Myers, Tabeau, Bullion, William Arundel, John Askins, and others. These merchants practically monopolized the fur trade of Illinois; but the Cahokians, finding that they interfered with the Indian trade as well, were strong enough to make regulations to protect their own interests and gave a limited monopoly of that trade to one of the citizens of the village, and prohibited all sale of liquor to the savages by others. When the Indian outrages reached their climax in the year 1789 and Kaskaskians were begging the military officer at Vincennes to send troops for their defense, the Court of Cahokia still further regulated intercourse with the Indians and forbade all sale of liquor by any one."

The WITNESS As to whether or not, referring to this last paragraph, it is a fact that Heward came down into Cahokia in 1790, would say, Heward came down; I am not sure it was Askins that sent him. Having had my attention called to page 509 of same volume, will read first power of attorney appearing on that page (reading):

3667 "To-day the twenty-fourth of April, 1787, there appeared at the office of the jurisdiction of Cahokia in the Illinois M. Hugh Heward, bearer of the following documents and he has required the registry thereof and has transcribed them in the present register himself, since the clerk does not understand the English language, as follows:

1st Piece.

Know all men by these presents that I, John Askins of Detroit, merchant, have made, ordained, constituted and appointed and by these presents do make, ordain, constitute and appoint and in my place and stead put and depute Mr. Hugh Heward of Detroit aforesaid my true and lawful attorney for me and in my name and for my use to ask, demand, recover and receive of and from any person or persons indebted to me or any of my former co-partners; giving and granting to my said attorney my sole and full power and authority to take, pursue and follow such legal courses for the recovery, receiving and obtaining of the same as I myself might

or could do, were I personally present; and upon receipt of the same, acquittances and other sufficient discharges for me and in my name to sign, seal and deliver; as also one or more substitute or appoint & again at his pleasure to revoke & further to do & perform & execute for me & in my Name all singular Thing or Things which shall or may be necessary touching & concerning the premises as fully & entirely as I the said John Askins ought or could do in & about the same or as if more especial authority was required than is herein given—ratifying allowing & confirming whatever my, said Attorney shall lawfully do or cause to be done in & about the premises by virtue of these presents.

In witness whereof I have hereunto set my Hand & Seal the fifteenth Day of November in the year One Thousand Seven Hundred & Eighty Six.

(Signed) JOHN ASKIN.

Signed, Sealed & delivered in presence of

JOHN McCASLAN Witness

WILLIAM PARK

HUGH HEWARD

Et a l'instan Loriginal

Remis a Mr. hugues huvard
labuxiere."

That is followed by other powers of attorney; from John Askin, George Leith and Angus Mackintosh of Detroit and directors of the Miamis Company and Hugh Heward of Detroit.

Whereupon counsel for complainant referred to and read page 523 of same volume, a power of attorney, as follows:

"Know all men by these presents that we, Edward William Gray Esquire, William Goodall, John Lilly, 3669 Peter Bouthiellier and Robert Cruickshanks, merchants, executors of the last will and testament of William Kay, late of Montreal in the district of Montreal in the province of Quebec, merchant deceased, have made, ordained, authorized, constituted and appointed and by these presents do make, ordain, authorize, constitute and appoint Josiah Bleakley, late of Michillimakinac but now of Montreal aforesaid, merchant, our true and lawful attorney, for us and in our name or (otherwise) and to and for our use, as executors as aforesaid, to ask, demand, sue for, recover and receive of and from all and every person or persons whatsoever whom it doth, shall or may concern, and particularly of and from David McCrae, David McCrae and Co., Pierre Antoine Ta-

beau, Jean Baptiste Morelle; James Aaron Holt and Charles Gratoit at Michillimackinac or elsewhere in the upper country, all such sums and sums of money, debts, dues and demands whatsoever, as are due, owing, payable or belonging to the said William Kay at the time of his decease, and now are or hereafter may become due, owing, payable or belonging to as the executors of his said last will and testament, for or by reason of any cause, matter or thing whatsoever and to compound and agree to take less than the whole for all or any of the debts or demands aforesaid, where the whole in all appearance cannot be got; and upon payment, recovery or receipt thereof or of any part or parts thereof acquittances or other good and sufficient discharges in the law for the same, for us and in our names and executors as aforesaid, accordingly to make, seal and deliver generally to do, transact, manage and perform all other matters and things anywise relating to the premises in such manner as to our said attorney shall appear most advisable and expedient as fully, amply and effectually in all respects as if the most special powers were to our said attorney for the purposes aforesaid by us given, or as we ourselves might or could do personally; and an attorney or attorneys under him for the purposes aforesaid, with the like or more limited powers, to make and at his pleasure to revoke.

Hereby allowing, ratifying and confirming all and whatsoever our said attorney, or his substitute or substitutes shall lawfully do or cause to be done in or about the premises by virtue of these presents. In witness whereof we have hereunto set our hands and seals the twenty-fifth day of April in the year of the Lord, one thousand seven hundred and eighty-eight.

Signed, Sealed and delivered in the presence of

JN. BOUTHIELLIER.
SAMUEL GENARD.

EDW. WM. GRAY	(L. S.)
WM. GOODALL	(L. S.)
JONNE LILLY	(L. S.)
P. BOUTHIELLIER	(L. S.)
R. CRUICKSHANK	((L. S.))

This registry was made on the requisition of M.
3671 Charles Gratoit and conforms to the original and was transcribed by me, Jean Dumoulin, merchant, in default

of a knowledge of the English Language by me, notary at Cahokia, October 28, 1788.

CH. GRATOIT,
JEAN DUMOULIN,
JOSIAH BLEAKLEY."

The WITNESS. I notice that this was registered in Cahokia same as other powers of attorney (reading):

"This registry was made on the requisition of M. Charles Gratoit and conforms to the original and was transcribed by me."

Referring to pages 575 and 577 of same volume, petition of La Croix in regard to trade will read into record:

"Petition of La Croix in Regard to Trade, October 29, 1785.

To MM. the Magistrates and the Honorable Court of the District of Cahokia.

Sirs:—

3672 Jean Bte. LaCroix has the honor to set forth to you that for the public good, the Court granted him on the 8th of March, 1782, permission to trade with the savages in this village under the conditions declared in the decree of the said Court, rendered the said day, March 8, 1782. The said M. LaCroix has not been troubled up to the present in his trading; but now he is in a position very prejudicial to the public and to the petitioner and which tends to cause the citizens to perish from hunger, especially at a time of such great calamity as we find ourselves in at present.

The alien merchants of Michillimackinac, gentlemen, are here and, far from contenting themselves with the asylum which we give them to sell their merchandise to the French, they are trading with the savages, who come to this village for all the goods which the said savages bring and are taking from us in this way the means of making a living, since they overcharge us for these same commodities of trade at exorbitant prices; and to the detriment of the people they are making hords of the goods in order to transport them out of the place or to sell them at prices most burdensome to the public. Since these merchants have no right of trade in this village and since, if we have some goods to trade with the Indians (this) advantage should belong to us and not to strangers; and since we suffer them here for

3673 convenience, after having been sent away from the Spanish bank, it is not just in us to permit these traders to carry off before our eyes what Providence offers us through the savages. But these traders are trading before our eyes and up to our very doors not only in merchandise but also in what is more pernicious, drink, and are favoring the savages at a time when one cannot be too careful. In order to avoid the evils which may result therefrom, I pray, gentlemen, that you have the goodness to continue me in my trading right and that all alien merchants for the future be forbidden to participate therein in this village or to trade in anything with the savages who come here, on pain of a fine, such as it shall please you to fix, and of confiscation of that for which they shall have traded; and in return the petitioner offers to conform to the conditions of the decree of the Court of the said 8th of March, 1782, so that this branch of commerce be preserved for us in our village (and not pass) to aliens; and this is my conclusion. At Cahokia October 29, 1785.

J. B. H. LA CROIX."

"Petition of La Croix in regard to Trade, October 29, 1785.

A messieurs Les Magistrate Et respectable Cour du district des Cahos.

Messieurs

Jean Bte La Croix a lhonneus de vours exposer que pour le Bien public la Cour luy a accorde le 8. de Mars 1782 la permission de la traite avec les sauvages dans de cillage aux conditions Expliquees dans la Sentence de ladite Cour rendue cedit jour j. mars 1782. ledt Sa traite mais presentement il se trouve (en) Cas au prejudice Notable du public Et de Lexposant qui tend a faire perir Les Citoyens de fiam sur tout dans d'aussi grandes Calamité comme nous nous trouvons presentement.

Les commercceans Etranger de missilimakina Sont icy Messieurs qui Bien loin de Se Contanter de Lazile que nous leur donnons pour vendre leurs marchandises aux francais trantent des Sauvages qui viennent a ce village toutes les douceurs que lesdt sauvages aportent Et nous otent par ce moyen les faculte de pouvoir vivre En nous survandant ces memes danrées de traite a des prix

Exhorbitant Et En En faisant des amas au detrimēt du peuple pr le transporter hor de Lendroit ou Le vendre a des prix plus honereaux au public comme ces com-
 merceants nont aucun droit de traite dons ce village Et
 que si nous avons quelque douceur a traiter des sauvages
 * * * (MS torn) * * * Benefice Nous apartient de
 droit Et non a des Estranger que nous soufr (ons)
 icy par Bienseance ayant Eté renvoyez de la rive
 Espaknole il nest past juste de Nous laisser Enlever
 par ces memes marchand a nos yeux ce que la providence
 nous offre par les sauvages; ce qui ces merchands trait-
 ent non Seulement des merchandise a Nos yeus jusques
 sur nos foyer mais Encore ce qui est plus pernici (eux)
 de la boisson Et soutent les sauvages dans un temp ou
 3675 on ne sauroit Etre trou Circonspect; pour Eviter (les)
 malheurs qui En prevent resulter je require Messieurs
 que vous ayez la bonté de me Continuer dans ma traite
 Et quil soit fait deffance a tous Commerceants Etranger
 de Sy immitter a lavenir dans ce village ni dy traiter
 aucune Chose avec les sauvages qui y viennent a piene
 dune amende telle quil vous plaira fixer Et de Confisca-
 tion de ce quils auront traitoir sous loffre que fait lex-
 posant de Se Conformer aux Conditions de la Sentence
 de la Cour dudit jour 8, mars 1782. Et que cette Branche
 de Commerce nous Soit Conservée dans notre village.
 * * * (MS torn) * * * aux Etrangers cest a quoy
 je Conclud aux Cahos le 29, 8bre 1785.

J. B. H. LA CROIX,"

3676 I have volume 5 of Illinois Historical Collections and have turned to page 172 and 173, letters of Thomas Bentley (reading):

"Thomas Bentley to A. S. De Peyster, August 12th, 1780. (B. M. 21845, f. 42—A. L. S.)

Ouyah the 12th August, 1780. .

Sir:

I beg leave to refer you to what I have already wrote you on the subject of Mr. Dejean. I beg the favour of you after perusing the enclosed to address & forward it to General Haldimand. As I wish to remit to Canada as well as to draw off from the Country I propose sending boats up this river for Detroit as well as the Illinois River for Macinac next Spring. I could wish for that purpose if it does not clash with the Service that the Savages might be requested not to molest any Boat

going up those Rivers for the purpose of carrying Remittance which I hope & doubt not but you will think reasonable. If the General or yourself should do me the honor to write me wish you would address me in a fictitious name for fear of accidents & send it by a person of confidence to be delivered only to myself. It is reported here that Canada is attacked by a French fleet. If it is likely to fall (which I hope will never be the case) beg of you to destroy these letters. I have the Mortification to inform you that Rochablave's malice has ruined me (irretrievably I fear) although my misfortunes originated with you yet I do not blame you. If you will be pleased to put me in a way of recovering myself at Detroit which you now have in your power to do, I will repair to you on your sending me proper Guides, but it must be in the Mercantile Line as I could not pay my debts recover my lost Fortune by any other means. I have the Honor to be with real respect,
Sir, Your very obt hble Servt.

T. BENTLEY."

I know who Thomas Bentley was in general way; he was a trader that had headquarters at Cahokia, traded at New Orleans, Montreal, Detroit and Michillimackinac, I believe; maybe other places. I think traded at Montreal; did at number of those places at least.

I read into record at page 369 of Volume 5 of Illinois Historical Collections: "Memorial of Francois Carbonneaux to Congress, December 8, 1874 (reading):

3678 "To the Honble. The United States of America in Congress assembled. The Memorial of Francois Carbonneaux of the Illinois Country, Agent for the Inhabitants thereof humbly sheweth:

That the said Inhabitants to the Number of four hundred Families exclusive of a like Number at Post Vincent, labour under the greatest Inconveniences for want of Order and good Government. That many ill disposed Persons have taken Refuge in their Country—That Population is daily increasing—That their Property is invaded and arrested from them by the Hands of daring Intruders and that Violences are frequently committed in various ways, against their Persons and against the Persons and Properties of the Natives. Your Memorialist doth therefore in behalf of the inhabitants aforesaid, humbly pray, that Congress will be pleased to take

their distressed Case into Consideration, and either immediately establish some Form of Government among them, and appoint Officers to execute the same, or that they will nominate Commissioners to repair to the Illinois, to inquire into their Situation, and to consult with the Inhabitants thereon; and do and execute such Matters and Things as they shall find necessary, until some regular Government can be established.

Your Memorialist conceives that it is in the Power of Congress by such a Measure, not only to restore Tranquility among the Inhabitants of an extensive and fertile Country, but to give Peace to those of the Frontiers of Virginia, and to establish, a valuable Commerce, not only with the Natives, but with new Spain, which is now wholly carried on by British Subjects from Canada.
Trenton Dec. 8th 1784

CARBONNEAUX."

Turning to page 410 and 411 of letter of Joseph Parker, to President St. Clair, "Joseph Parker to President St. Clair, October 2, 1787," I read last paragraph (reading):

"The inhabitants also complain of the traders from Michilimakinac and Detroit, that they should be suffered to remain in their villages, and engross all the fur trade and country belonging to the United States, to the great injury of American Subjects. The inhabitants are of opinion that nothing but a government will check their practice of setting the savages upon them.

There is such a considerable trade carried on in the Illinois, that a sufficient revenue might be raised by laying a duty upon the goods carried into that country, and upon the fur carried out. The traders in St. Louis and St. Genevieve, on the other side of the Mississippi
3680 have not less than an hundred traders, who are supplied with goods annually from Michilimakinac and Detroit, and sent down to Kaskaskia and Cahokio, and the Spaniards come over and purchase them. Each trader purchases, on an average, from thirty to forty thousand livres annually, which is six thousand dollars. The traders of St. Louis and St. Genevieve have often told me, if Americans would supply them with goods at Kaskaskia & Cahokia they would give them the preference, and allow them 125 pr ct advance on the sterling cost. You

will easily perceive the revenue that might be raided annually in that new country.

I am, Sir, yr hble servt

JOS PARKER."

Don't know whether Parker was sent our pursuant to Car-bonneaux memorial. Memorial is dated December 8, 1784; Parker's letter is dated 1787. Having read record before remember name Parker being connected with inci-3681 dent in Kaskaskia of driving out John Dodge. Find note here speaking of hostility of two men. Don't know full details of Parker or how long at that post; at Kaskaskia; think very short time. Think St. Clair was President of Congress. I turn to page 381 and 382, petition of Pierre Langlois, bottom page 381 (reading):

"Pierre Langlois,

Notary and clerk.

Kaskaskia, County of the Illinois, this second day of June, of the year of our Lord, one thousand seven hundred and eighty-six.

We, the undersigned, pray Congress to take notice of the country of the Illinois and to establish immediately the government for the protection and defence of the inhabitants and their property; for we believe (that) the fertility of the land and the great advantage to be derived by commerce (will attract) a great immigration 3682 to the advantage of the country. We think that this is not a small object for Congress. It is for this reason that we pray for a system of government to protect us, to strengthen our hands, and to maintain our rights, not only against the Indians, but rather against Michillimakinac and a company of the subjects of Great Britain who are getting possession of the commerce from the good subjects of the states. They have established at Cahokia, a village near us, a trading post which causes great harm and detriment to the good subjects of the states. They have destroyed the establishment of the law which the inhabitants had made among themselves. We suffer a great loss in the recovery of our just debts.

We, therefore, again pray Congress not to abandon us any longer; but to send and grant us laws without delay, for the subjects of Great Britain threaten to take us under their laws. Likewise a few persons upholding the subjects of Great Britain have installed themselves

as commanders to such a point as to take subjects of the states and transport them to the Spanish shore and have them imprisoned, to the disgrace of the establishment of the government of the states. The men who have assumed command are M. M. Nicholas Lachanse and John Dodge.

PIERRE LANGLOIS,
Notary and clerk."

3684 From my knowledge and recollection of passage in Vol. 2 of Illinois Historical Collections, page CXXXII, "The long expected reply from Congress was brought to Kaskaskia by Joseph Parker in January, 1787. The people were eager to learn its contents, and sent in haste to Barbau at Prairie du Rocher that he might come and open it," and of Perrault's statements, Heward's, Governor St. Clair's statements, letter of Governor Cass to Kinzie, all in evidence, should think there was an indication that there was some little commerce, during period from 1782 to about 1817, that went by way of St. Louis, Cahokia and Kaskaskia and Canada. Don't know just how much. There was some commerce passing between Canada and territory in vicinity of Cahokia, Kaskaskia and St. Louis. Think there are evidences of that, as I have read over the letters in Kaskaskia records. I find a number of traders who were connected with Canadian towns. A number of references in book, which could not refer to at present, however, indicate some of trade went by way of Detroit and other places.

Re-direct Examination by Mr. Scott.

Date of report of General Gage for seat of Government at Montreal, which I was asked to compare with statement he made in 1773, appearing in Kaskaskia records, is March 20, 1762.

3685 Will read into record portion of his report from page 71 where he suggests remedy, after setting out difficulty with trade. (Reading):

"To remedy the Inconvenience & abuses, which both the English & French have suffered, thro' the management of the Indian Trade; I know no better method, than to assign a certain Number of Posts in the distant Country, to which only, the Traders should be allowed to traffick, and to abolish all the little Posts.

And I am of opinion the Five Posts hereafter mentioned, will enable His Majesty's subjects to trade with almost every Nation of Indians, that has yet been discovered, and that have been accustomed to Trade with the French, viz. Kanamistigoua on Lake Huron, Michilimackinac Baye des Puants in Lake Michigan, The Detroit, and Houliatanon, on the Ouabache."

Will read next paragraph after paragraph which I was asked to read in to record on page 162 of Carter, which referred to arrangements as result of Quebec Act. (Reading):

3686 "These arrangements were not put into execution, however, because of the outbreak of the American Revolution, which absorbed the whole attention of both the home government and Canada. As early as January, 1774, the detachment of troops had been ordered to leave Fort Gage, and the allowance to the commanding officer discontinued. From this time on little or no attention was paid to western affairs. Illinois was left in the hands of a Frenchman named Rocheblave, who acted as agent for the government from 1776 to 1778. His best efforts to save the country to Great Britain were, however, in vain. As the government had ignored his call for troops, an American army under George Rogers Clark easily effected the conquest of Illinois, and the whole Northwest in 1778."

3687 MILO MILTON QUAIFE, a witness on behalf of defendant.

3688 I am 30 years old and teach history in Lewis Institute of Technology. I graduated at the Nashua, Iowa, High School in 1899; after that spent four years in Iowa College in Grinnell; graduating from that institution in 1903 with the degree of Ph. B. Then spent a year teaching in Sheffield, Illinois, High School and the next year in graduate study at the University of Missouri, taking my degree in the department of history and political science with especial emphasis upon history, receiving the degree of Master of Arts in the spring of 1905. From 1905 to 1908 was a graduate student in the University of Chicago, taking work in the departments of history and political science, history being the field of my major study and received the degree of Doctor of Philosophy,

Magna cum laude in the spring of 1908. Since the fall of 1908 have been teaching in the Lewis Institute of Technology, the first year as instructor in history, and from 1909 assistant professor in history and active head of the department. In the school years of 1904 and 1905, was University scholar in history at the University of Missouri, an honor appointment. In 1905 and 1906, and 1906 and 1907, I was University fellow in history in the University of Chicago, likewise honor appointment. In 1907 and 1908, was an assistant in the University of Chicago, and my work was to teach classes of modern European history. I have published a monograph on "The Doctrine of Non-Intervention of Slavery in the Territories" privately printed in 1910, which is my doctoral thesis for the degree in the University of Chicago. In 1909 and 1910 I edited the diary of President Polk, which was published in four volumes by McClurg & Co. of Chicago, and has been favorably reviewed by standard critical reviews, such as the American Historical Review and the Annals 3690 of the American Academy of Political Science. During the summer of 1908, was engaged with Dr. Woodhead of the University of Chicago, a member of the Sociological department of the faculty of that institution in preparing a report on the subject of rapid transit subways, which was published by the Committee on Local Transportation of the Chicago City Council in 1909, and is historical and statistical in character.

My part of the work was to investigate the subway system of Boston, New York and Philadelphia, and I wrote those sections. Am a member of the American Historical Association, Mississippi Valley Historical Association, and was a delegate of the Chicago Historical Society to the annual meeting of the Mississippi Valley Association at Iowa City, in 1910. On

May 18, 1911, I delivered a paper before the latter association at Chicago on The Chicago Massacre. In June, 1909, delivered a lecture before the Chicago Historical Society on the 60th anniversary of the death of James K. Polk, my subject being "The Obscuration of James K. Polk." Have delivered two articles for publication in McLaughlin & Hart's forthcoming cyclopedia of American government on the subjects of the Wilmot Proviso and Non-Intervention with Slavery. For several months, have been engaged in preparing a history of Ft. Dearborn and early Chicago, to appear next year under the auspices of the Chicago Historical Society as the chief feature of its communication of the cen-

ennial of the massacre. The society has placed at my disposal all its manuscript and other material which has been accumulated during its existence, and which so far as it pertains especially to Ft. Dearborn, has been reserved for this work, and therefore, has not been accessible to scholars generally. It is chiefly in connection with this study that I have acquired my knowledge of the early history of Chicago and surrounding region. Have investigated certain writers or authorities referred to by the government witnesses as to their standing. Was familiar with a large majority of them before my attention was called to this case, due to the study of the history of Ft. Dearborn and early Chicago, above mentioned, and my general historical training. I consider that my training as a historian has equipped me to determine the weight to be given to the statements of these writers.

Beck, the writer of Beck's Gazetteer, referred to by Prof. Alvord in his direct testimony at page 289 (Abst., 131) of this record, rests his statements as to the practicability of a canal upon a report of Graham and Philips. He seemed to have used other reports in making up his general discussion. That being true, Beck's Gazetteer will possess whatever force attaches to that report, but will have no additional significance.

Referring to the Cass letter to the Secretary of War, dated June 20, 1816, referred to by Alvord on page 226 (Abst., 98), wherein Cass refers to "Three great channels of communication by which traders may introduce the goods into the Mississippi and Missouri country from the British Dominion. One is by way of Chicago and down the Illinois; another by way of Green Bay up the Fox River and down the Wisconsin. This has been the great thoroughfare along which goods have been taken," etc., and where, speaking of the establishment of posts, he says, "another at Chicago will effect the same object upon the Illinois," my conclusions as to the suggestion relating to a route by Chicago and the Illinois or the Desplaines are that Cass, being an able man and well informed, is worthy of consideration. His general mention of the channel of trade by the Chicago and Illinois rivers, makes no specific mention of the Desplaines. As to the use made of that, we must rely on deductions from our knowledge from other sources. When usable, the Desplaines would probably be used in connection with this route, while at other times, the trade would have to be carried on it without utilizing the Desplaines.

From Hubbard we know the Desplaines could be used at times of spring flood; was sometimes used at other times with greater or less difficulty, and at times could not be used at all. Traders make provision for carrying on their work, either from choice or necessity, without the use of the Desplaines. In support of the last statement I cite Chap. 17, page 150 of the Caxton Club edition of Wau Bun, which states that Kinzie carried on most of the trade with his out stations by means of pack horses. Graham and Philips state that at times the portage was 50 miles and that traders' boats were transported by wagon. The title page of Wau Bun reads: "The early Days of the Northwest by Mrs. John H. Kinzie of Chicago. New edition with an introduction and notes by Reuben Gold Thwaites, Editor of the Jesuit Relations and allied documents, Wisconsin Historical collections, Chronicles of Border Warfare, etc., with numerous illustrations, Chicago, The Caxton Club, 1901." Mrs. Kinzie took up her residence in Chicago about 1834; she was the wife of John Harris Kinzie, a son of John Kinzie, the trader, who lived at Chicago from 1804 with intermissions, to his death in 1828.

Motion to strike out answers of the witness stating facts as if based on his own knowledge without giving authority for his statements.

3698 (Witness reading from Wau Bun, page 149):

"Mr. Kinzie's enterprising and adventurous disposition led him, as he grew older, to live much on the frontier. He early entered into the Indian trade, and had establishments at Sandusky and Maumee, and afterwards pushed further west about the year 1800 to St. Josephs. In this year he married Mrs. McKillip, the widow of a British officer, and in 1804, he came to make his home at Chicago. It was in this year that the first fort was built.

By degrees, more remote trading posts were established by him, all contributing to the parent one at Chicago; at Milwaukee with the Meenomonees; at Rock River with the Winnebagoes and the Pottowattamies; on the Illinois river and Kankakee with the Pottowattomies of the prairies, and with the Kickapoos in what was called 'LeLarge,' being the widely extended district afterwards erected into Sangamon County.

Each trading post had its superintendent, and its complement of engages—its train of pack horses and its

equipment of boats and canoes. From most of the stations the 'fur and peltries' were brought to Chicago on pack horses, and the goods necessary for the trade were transported in return by the same method.

The vessels which came in the spring and fall (seldom more than two or three annually), to bring the supplies and goods for the trade, took the furs that were already collected to Mackinac, a depot of the Southwest and American Fur Companies. At other seasons they were sent to that place in boats, coasting around the lake."

3699 Schoolcraft in his account of the trip up the Illinois in 1821 (which has been read into the record in connection with the testimony of the witnesses for the State and Mr. Lee) says he talked with some traders who thought a canal to Mount Joliet would answer.

3700 Referring to the Graham and Phillip's report, the statement which I had in mind when I said the Desplaines could not be used at all, is as follows (reading from page 9 of this document):

"On opening the canal, however, two difficulties would be experienced. First. The Plein would be found to be above the level of the canal; its water of course would be diverted from its natural channel, and pass by the canal into the lake. Second. Supposing that evil remedied by a lock to lift vessels into the Plein, yet the Plein, during half the year, does not contain water enough to float a boat, and so could not become useful as a national highway."

3701 The paragraph on page 9 beginning, "To conclude, the route," which appears at page 258 of the transcript (Abst., 116) is pertinent in this connection.

Q. Now if you have further citations upon that same point please give them.

A. Hubbard after 1824 used horses instead of the Desplaines River in connection with the fur trade.

Motion to strike out as not responsive and a statement by the witness without showing authority.

3702 I refer to page 136 of Hamilton's Hubbard, which appears at page 505 of the transcript (Abst., 220-221) and continues to page 506, the last words being "designated on the old maps as Hubbard's Trail."

The letter of Cass states nothing directly as to the Desplaines. Our inference as to the Desplaines will be controlled

by our knowledge from other sources of the conditions governing the navigation of the Desplaines.

It was agreed between counsel that all this testimony could go in subject to the objection incompetent, irrelevant and immaterial.

3703 The WITNESS (continuing): I am familiar with the two translations of Charlevoix's letters of September 14th and September 17, 1721, which appear in the record in this case; the one of September, 1761, and the other of 1763, and I have compared those translations with the original French appearing in a volume entitled "Journal d'un Voyage fait par ordre du Roi dans l'Amerique Septentrionale. Adresse a Madame la Duchesse. De Lesdigvieres. Par le P. De Charlevoix, de la compagnie, de Jesus, Tome Sixieme. A Paris. Ches. Pierre—Francois Giffart rue Sainte Jacques, a Sainte Therese. M. Doc XLIV. Avec approbation & Privilege du Roy."

A preliminary requirement for the degree of doctor of Philosophy at the University of Chicago is the ability to read French and German for purposes of historical investigation. I have complied with that requirement without difficulty, and in connection with my studies at the University and to some extent since then, have made use from time to time of French documents.

3704 For ordinary purposes of historical investigation, where necessary with the aid of a dictionary, I am able to carry on my work; though, I do not pretend to have completely mastered the French language.

Objection. In view of the witness' answer, the government objects to any evidence from him with reference to either the correctness or incorrectness of either translation.

Q. Now, Dr. Quaife, you say you have compared the translations with the French text; is your knowledge of French sufficient to enable you to determine which, if either, of these translations is correct?

Objection, same as foregoing.

A. I so consider.

In making a comparison I cite the pertinent portion of the original French text, the title page of which has just been read, Volume 6, page 104, "Après qu'on l'a remontée cinq ou six lieues, on passe dans celle des Illinois par le moyen de

deux portages, dont le plus longue n'a que cinq quarts de
3705 lieues; mais comme cette Riviere n'est encore qu'un

Ruisseau en cet endroit, on m'a averti que dans la Saison,
ou nous sommes, je n'y trouverois pas assez d'eau pour mon
Canot."

The translation of this section used in court as given in the
record, page 135 (Abst., 58), and in Alvord's direct testimony,
page 762 (Abst., 317), is as follows: "But being informed
that at this season of the year there is not sufficient water for a
canoe * * *." The correct translation of the portion be-
ginning with "mais" should be "but as this river is only a
brook in this place (or at this place) I was informed that at
this season I would not find water enough for my canoe."

The French for the whole clause, "But as this river is only
a brook in this place," etc., is as follows: "Mais comme cette

Riviere n'est encore qu'un Risseau en cet endroit."

3706 "Je crois vous avoir

fait entendre dans ma
derniere que j'avois a choisir
de deuz Routes pour gagner
les Illinois; le premiere etoit
de retourner au Lac Michigan,
d'en cotoyer toute la Cote
Meridionale, & d'entrer dans
la petite Riviere de Chicagou.
Apres qu'on l'a remontee cinq
ou six lieues, on passe dans
celle des Illinois par le moyen
de deux portages, dont le plus
longue n'a que cinq quarts de
lieues; mais comme cette
Riviere n'est encore qu'un
Ruisseau en cet endroit, on
m'a averti que dans la Saison,
ou nous sommes, je n'y trou-
verois pas assez d'eau pour
mon Canot; j'ai donc pris
l'autre Route, qui a bien aussi
ses incommodites, et n'est pas
a beaucoup pres aussi agre-
able; mais elle ets plus sure."

"But, as this river is only a
brook in this place (or at this
place) I was informed that at
this season I would not find
water enough for my canoe."

3707 Q. Would a translation, or could a translation of the
passage which you have read and which was referred

to by the State which omitted or gave no equivalent for the words meaning that this was only a brook at this season, would that fairly be called a free translation?

Objection that the translation speaks for itself and is not a matter for expert testimony.

A. The term "free translation" is a loose term. As it is commonly used, I should say that this is an incomplete or partial translation of the French text.

Have read the testimony of Professor McLaughlin taken in this case, and having in mind his conclusion based upon these letters of Charlevoix as to a "route by way of the River of Chicagou and the Desplaines River" appearing on page 762 (Abst., 317) of the record.

3708 I see no reason for questioning the correctness of this conclusion where he states that it appears to him an inevitable conclusion that the route by way of the River Chicagou and the Desplaines was a known route at that time and one which he preferred to take if he could do so. Charlevoix there records the Illinois and Desplaines as one stream.

The passage wherein he designates the Illinois as only a brook reads "And enter the old river Chicago, after one has ascended this five or six leagues he passes into that of the Illinois by means of two portages." Concerning this he expressly states that, "this river is only a brook in this place," the French word "endroit."

3709 Objection that the translation has been misread.

3710 The WITNESS (continuing): The French text reads, "mais comme cette Riviere n'est encore qu'un Ruisseau en cet endroit." This does not stand upon information, but is Charlevoix's own statement, "but as this river is only a brook in this place" or "in that place." I have stated the translation exactly as it appears in the original French.

He refers to the upper part of the Desplaines and the statement that "I was informed that at this season I would not find water enough for my canoe" is explanatory.

Thus it will be seen that Charlevoix saying that there were two routes of travel, one by way of Chicago, does not necessarily imply anything as to the navigability of the Desplaines; while there is a positive assertion which precludes the possibility of its being navigable in the upper part at least.

My conclusion with respect to this passage is that one could hardly find a stronger historical fact of the non-navigability of the Desplaines, or at least a part of it, since he
3711 treats the Illinois-Desplaines as one stream, but does not definitely indicate where it ceases to be a brook.

His is not the testimony of one who has tried the passage and failed, but the statement of one who fully intended to take it, gave it up and chose a disagreeable and tedious way as a substitute on information which he relied upon to the effect that the Desplaines would not float a canoe.

The statement that the Desplaines is "a mere brook" is given quite incidentally, and it being unconscious evidence, is therefore, of high value.

I would also note that Charlevoix's means of judgment as to the reliability of this information was better than ours can be and that he used a mere canoe, which could be easily carried by two men.

Objection; not responsive; witness not qualified to state conclusion on this matter.

3712 I can best state Charlevoix's position as an authority by reading from Winsor's *Narrative & Critical History*, Volume 4, page 154, heretofore referred to in this case. An article written by Charles C. Smith, in the chapter on Acadia, reads:

"Among the later French writers the pre-eminence belongs to the Jesuit Father Pierre Francois Xavier de Charlevoix, who had access to contemporaneous materials, of which he made careful use; and his statements have great weight, though he wrote many years after the events he described. His *Historie de la Nouvelle France* follows the course of the French throughout the continent, and scattered through it are many notices of the course of events in Acadia, but its more particular characterization belongs to another chapter."

In this connection, I refer to page 358 of the same volume, the chapter, a *Critical Essay and Authorities*, on Frontenac and his time, by George Stewart, Jr.:

3713 "The general history of the administrations of Frontenac, De la Barre, and Denonville, is exhaustively treated by Father Francis-Xavier de Charlevoix; and the first place in time and importance among the contributions to the general history of Canada, of a date earlier than the present century, must be given to this Jesuit's *Historie et Description Generale de la Nouvelle France avec le Journal Historique d'un Voyage fait par l'ordre du Roi dans l'Amerique Septentrional* which was issued at Paris in 1744. Shea says: 'Access to State papers and archives of the religious order to which he belonged, experience and skill as a practical

writer, a clear head and an ability to analyze, arrange and describe fitted him for his work. Parkman, whose studies have made him a close observer of Charlevoix's methods, speaks of his "usual carelessness."

Charlevoix arrived in Canada in September, 1720, on an expedition to inspect the missions of Canada. His purpose took him throughout the limits of New France and Louisiana, and by the Illinois and the Mississippi to the Gulf. His work is commensurate with his opportunities; his faults and errors were those of his order; and his religious training inclined him to give perhaps undue prominence to the ecclesiastical side of his subject; and though the character of Frontenac suffers but
3714 little at his hands, some of the prejudice which Charlevoix bestows upon the Recollects necessarily colors his judgment in matters where the Governor came in contact with the Jesuits."

I would point out that neither of the qualifications made in the passage just read from page 358 apply to the case in point. First, that he describes events that date prior to his time, and second, that being a Jesuit, he emphasizes their doings and was unfair to Frontenac and the Recollects.

Motion to strike out on the ground that the passage refers to other and later historical works than the excerpt from the letter in question.

3715 The WITNESS (continuing): Summarizing my conclusions as to the significance of Charlevoix's letter, the passage shows that persons passed from the Great Lakes to the Illinois country by way of the Chicago-Illinois route; it expressly shows that the upper part of this, evidently the Desplaines, although it is not clear how much of the upper part or how much of the Desplaines was a mere brook. It shows that at this season, September, it was so dry as not to float a canoe, the lightest sort of a craft. Since a canoe could readily be carried, it seems a fair inference that the information as to the lack of water sufficient for a canoe applied to a considerable portion of the river. Otherwise, it would not have been deemed an obstacle to the passage of it.

Charlevoix's letter shows the difficulties of the Kankakee route. Therefore, he believed the Chicago-Desplaines route was even more tedious. Therefore, my conclusion is that the lack of water referred to applied to a considerable portion
3716 of the Illinois, or, as we would say, the Desplaines river.

Have examined the excerpts from Ebenezer Child, Wisconsin Historical Collections, Volume 4, page 162, appearing in the transcript of the testimony of Mr. Alvord at transcript pages 277 to 280 (Abst., 126-128), which passage shows that in 1821 Child went down the Mississippi river to St. Louis and returned by way of the Illinois river to Chicago; that he found two feet of water all the way between the Desplaines and the Chicago rivers. Apparently he had a small canoe, for he had only one Indian and one Frenchman to paddle it.

I conclude that the report merely shows the canoe could and did go up the Desplaines river and across the portage to Chicago in a time of flood.

3717 Coming to Darby, who is referred to in the record by Alvord at page 237 (Abst., 104), and subsequently by other witnesses for the Government; the map published as a frontispiece to Darby's tour from the City of New York to Detroit in 1818, published at New York in 1819, shows the portion of the United States beginning about the middle or western boundary of Lake Michigan and Lake Huron on the north, and to about the line of the Hudson river projected north and south on the east, and approximately the southern boundary of Kentucky on the south.

3718 The southern portion of the map purporting to portray the country around the south end of Lake Michigan and vicinity and to the Mississippi river is not accurate.

Objection that the witness has not qualified himself to check up the topography or geography.

The WITNESS (continuing): I am as familiar with the geographical conditions throughout Illinois and this part over to the Mississippi as an intelligent man would be expected to be.

The map represents the Chicago river as rising in Wisconsin, and I would say approximately in the neighborhood of Milwaukee.

No south branch of the Chicago river is shown at all.

The Plein rises just south of the northern boundary of Illinois, inland a considerable distance from the lake.

The Fox river, apparently, although the name is not given, rises far up in Wisconsin, over one-third the distance from south to north of Lake Michigan.

It is an appreciable distance from the Chicago river at the nearest point. What evidently stands for the Kankakee river, but unnamed, lies far to the south of Lake Michigan

and rises in north central Indiana far from the St Joseph river.

There is no scale of miles accompanying the map, but basing my estimate on my general knowledge of distances in this region, I would say about a hundred miles.

Between the source of the Kankakee and the St. Joseph rivers, at a considerable distance from each, is the Calumet, which is represented as a larger stream than either the St. Joseph or the Plein, and as running approximately two-thirds of the width of Indiana from east to west.

The Spoon river is represented as rising in southern Wisconsin not far apparently from the modern Madison and as flowing almost due south to slightly west to the Illinois river at a point due east of Fort Madison, Iowa. There is no Rock river shown on the map. The whole of western Michigan from a point in northern Indiana perhaps two-thirds of the way up the Lower Peninsula is labeled "This part is very imperfectly known."

3720 The eastern boundaries of Illinois as shown on the map, do not agree with the facts. They are represented as touching Lake Michigan only by an easterly projection at the extreme north end of the state. For the rest, the eastern boundary of Illinois lies an appreciable distance to the west of the southern end or western line of Lake Michigan.

Darby was himself a map maker and spent a number of years in Louisiana and made a map of Louisiana and in his book on that territory are testimonials from eminent men concerning the reputation and excellence of that map. Two of them being from Thomas Jefferson and General Wilkinson.

3721 In view of the fact that Darby was a skilled map maker and that map referring to the eastern shore of Lake Michigan, the western part of the State of Michigan, and a portion of the northern part of Indiana, states that it is very imperfectly known and from the other features which I have pointed out, I conclude that Darby had very little knowledge or detailed knowledge of the geographical condition of that particular region.

Said map thereupon offered in evidence. (Copy appears at appendix)

Giving special attention to addenda number 2, page 27, of Darby's book, the particular excerpt referring to the Chicago and Illinois rivers and the river Plein, appearing on transcript pages 239 and 240 (Abst., 105-106) of the record, in

which Darby says that "No doubt now remains but that
3722 the Chicago and Illinois rivers afford by far the most
eligible natural connection between the northern and
southern waters of the United States. * * * The latter stream
(Illinois) is formed towards its source by two branches, one of
which rises south of Lake Michigan, and the other (River
Plein) rises in the flat country west of Chicago, and flowing
south, unite to the southwest of the extreme south part of
Michigan," and the remainder of that paragraph concluding
with the sentence, "The Plein also flows with a very slight
current, and the two streams present almost a strait between
the Mississippi river and Lake Michigan," as a historian, I
would conclude in a general way that Darby's knowledge of
this particular region was not exact or detailed.

3723 I would say that some statements in the passage are
apparently correct and some are not. For example, he
says "The Chicago and Plein intermingle their sources."

I don't understand that the source of the Plein is in the
vicinity of the source of the Chicago.

He says further, "The Plein also flows with a very slight
current." This, I understand, is not an accurate state-
ment.

3724 A statement by Darby introductory to an editorial
from the St. Louis Enquirer says:

"The following interesting notice decides the long
contested problem of a natural water communication
between the waters of the St. Lawrence and Mississippi
rivers and contains also some items of valuable infor-
mation."

This statement raises suspicion as to the validity of Darby
in the mind of a student. The idea that a single editorial
which is obviously a biased one could decide so important a
question is little short of absurd.

I refer to the editorial from the St. Louis Enquirer intro-
duced by the United States, appearing on transcript pages
240 to 242. (Abst., 106-107.)

Of that editorial, referred to at page 767 of the transcript
(Abst., 320), Professor McLaughlin says in his conclusion:

"Here we have a statement by a contemporary of a
general condition of which he apparently had personal
knowledge as far as it at least could be based upon the
arrival of boats at St. Louis, and the reputed journey.

3725 Taking all of the passage together, this appears to me
to be very influential evidence to lead the historian to

believe that the river Plein was used in connection with the Chicago as a route for trade and commerce in the early part of the nineteenth century at least."

And he further says on page 768 (Abst., 320), that he could not see

"that there would be any reason for a misrepresentation or mistake. It would be unnatural, in my judgment, that a newspaper in a comparatively small place would make a statement of this kind which could easily be known to be untrue by at least a great many citizens of the place, without any particular investigation, if it were wholly without foundation."

And he further says, on page 768 (Abst., 320), in answer to the question.

"And as to the interest which people who live in St. Louis had in this particular water route? I can not see any influence coming from prejudice of that kind inasmuch as St. Louis was in a very advantageous position on the Mississippi near the Missouri and the Ohio, furnishing that city with unusual means of communication with the east and the south for the transportation of its commodities. Subjecting therefore this source to such criticism as I may be able to give it, it has with me very great weight."

3726 I think Professor McLaughlin rates the editorial too high. He says, "The author apparently had personal knowledge."

It is a matter of common knowledge that newspaper editors write on all sorts of subjects, about only a small proportion of which they are likely to have personal knowledge. McLaughlin qualifies the objection to personal knowledge by "As far at least as it can be based on the arrival of boats and their reputed journey" which refers to the statement, "Hundreds, nay thousands of boats," which latter statement is a great exaggeration, if not entirely untrue.

Professor McLaughlin can see no motive for misrepresentation or mistake. I think the editorial supplies one in part.

3727 The writer assumes to speak for "merchants and statesmen" where he says, "the communication between the lake and the Illinois is a point which will fix the attention of the merchant and statesmen. They will see in it the gate which is to open the northern seas into the valley of the Mississippi and which is to connect New York and New Or-

leans by a water line which the combined navies of the world cannot cut off."

McLaughlin sees no interest or prejudice on the part of the St. Louis people since that town is advantageously located on the Mississippi with good communication with the east and south. The sentence above quoted from the editorial supplies such an interest, as St. Louis would doubtless desire to have still better communication with the east, especially in time of war. The war of 1812 had closed shortly before and for a period of three years and to some extent a much longer period the sea trade of the United States had been cut off.

3728 McLaughlin says, "It is unnatural" for a newspaper to make a statement of this kind which could easily be known to be untrue by many citizens of the place. This does not seem to me to be unnatural. It is common knowledge that newspaper editors are frequently partisan, and that in such editorials, facts of common knowledge are distorted and misrepresented. Also, a newspaper editor can safely rely upon the general lack of information concerning geographical details of a region four hundred miles away. For example, what detailed knowledge does the average citizen of Chicago possess of the falls of the Ohio at Louisville? Furthermore, this editor is arguing for a thing in which all are interested. If the people detect the fallacy in his argument they will have no interest in taking him to task for it.

Careful historians frequently use editorials, but only critically and with caution.

3729 In the nature of things they are hastily written; they deal with matters about which the writer frequently, if not generally, has no first hand knowledge; they are frequently, if not usually, partisan in character. As pointed out, there is every reason for seeking to test it by collateral information and using it with extreme caution unless corroborated.

Checking up this editorial, I find this evidence of inaccuracy. It says:

"The Chicago and Plein are the drains from these ponds; they have neither falls nor shoals; they have not the character of streams, but of canals; the water hardly moves in their deep and narrow channels."

This is not an accurate statement as applied to the Plein.

3730 Speaking of boats of ten or a dozen tons burden making the passage across from Lake Michigan to the Plein, he says, "Hundreds, nay thousands of boats have been seen at St. Louis, which have made a similar passage."

Still further, he says that "while the State of New York opens a canal of three hundred miles the Federal Government should not be appalled at undertaking one of three hundred rods. It might be dug in the time that a long winded Congressman would consume in making a speech against its constitutionality."

It seems to be those statements could not be regarded as correct.

It seems obvious from the consideration of the editorial that the statement, "Hundreds, nay thousands of boats" applies to boats which have made the passage across from the Chicago to the Desplaines, and applies to a period comparatively recent.

From my general knowledge of conditions at Chicago and the trade of the Illinois country generally in the period preceding the date of the editorial, I would say that this assumption is greatly exaggerated.

3731 Even adopting the interpretation placed upon this passage by the Government witness, I still should regard it as incorrect and extravagant.

I believe that it is extravagant, because during the period from 1763 to 1774 and on in a general way until 1790, such trade as there was between Canada and the western posts, which would include the Illinois country and St. Louis, was chiefly by way of the Wabash route. From 1763 to 1774 the English tried to turn this trade up the Ohio; but with the passage of the Quebec Act in 1774 it fell back into its old channels.

3732 By the "old channels" I refer principally to the Wabash route, which was the chief route between Canada, and the lower Illinois in that period. For the rest, the trade of this country went down the Mississippi river, chiefly having New Orleans as its outlet. From 1804 to 1812 John Kinzie was established at Chicago and came to control the fur trade of the surrounding region. He relied mainly on horses in the conduct of this trade as shown by the passage from Wau-Bun. Kinzie was a partner of Forsyth, who was stationed at Peoria, during this period, and it seems reasonable to suppose that there was not much trade by way of the Illinois which was not under Kinzie's control.

The trade of the northwest down to and through the war of 1812, so far as there was any trade during the war, was controlled largely by the British, who would find it difficult to operate through Chicago in that period.

From 1812 to 1816 there apparently was little trade and few traders in this region because of the war.

3733 That brings us to the period of the editorial, and even though we include the period from 1764 it still seems an unwarranted statement to say that thousands of boats have been seen at St. Louis which have made the passage referred to.

3734 I now present further references indicating conditions at or about Chicago and this territory during the period from 1764 to the time the editorial in question was written.

I first call attention to the Illinois Historical Collections, Volume II, Volume 1 of the Virginia Series, edited by Professor Clarence W. Alvord, which contains an introduction of 150 pages consisting of a history of the County of Illinois by Professor Alvord. The Period covered by the volume and history is from 1778 to 1790.

(Reading, page 16, in Roman numerals):

3735 "Besides these settlements of the American Bottom on the Mississippi River, there were in the valley of the Wabash the two important posts of Ouiatanon and Vincennes, the latter of which rivaled the Illinois villages in population and importance; for it was by the Wabash that the principal trade route between the more western posts and Canada ran."

Here there is a footnote reference which cites in support or explanation of this statement: "Benton, *The Wabash Trade Route*, J. H. U. Studied, xxi; Dunn, *Indiana*; passim; Craig, *Ouiatanon*, in *Ind. Hist. Soc. Publications*, ii; Franz, *Die Kolonisation des Mississippi-tales*, 199."

To continue the citation then (reading):

"Many smaller settlements were scattered throughout the region; at Peoria on the Illinois river, where lately Jean Bte. Mailhet had revived an older trading post; at St. Joseph on the river of the same name, and at Miami; and here and there smaller groups of French traders might be found in the Indian villages and elsewhere. These smaller posts served only the purposes of trade. Their white inhabitants, being migratory in their habits, either followed the Indians on their periodic

hunts or went from one post to another merely to buy the furs when the Indians returned.

3736 The British Dominion ended with the Mississippi River. On the Western bank were other French villages such as St. Louis and Ste. Genevieve, belonging to the Government of Spain. They did not differ greatly in character or population from those of the British shore, but since the rule of the Spaniard was on the whole more congenial to the Gallic temperament, many of the more progressive settlers from the eastern bank had made their homes there during the last decade, and the Spanish bank enjoyed greater prosperity and a more rapid increase of population than did the British, advantages which the events of the succeeding years tended to augment, so that at the end of the period under review the Spanish shore had profited by the misfortunes of the neighboring villages.

Most of the French of the Western posts came from Canada, with which country they retained constant communication through trade and exchange of messages on family affairs. Very few had come directly from France and the number from southern Louisiana was relatively small. Here in Illinois and on the Wabash which under both the French and British regime were subject to the same jurisdiction, they had lived for one or two generations, engaged in the pursuits of trade and the cultivation of their small farms."

Now I omit to page 27, Roman, of the same article (reading):

3737 "The foregoing descriptions of conditions in British Illinois would be far from complete without an account of one very important element of society. No sooner had the news gone forth that the land to the north of the Ohio river had been ceded to England by the French than the merchants of the seaboard colonies began to compete for the fur trade of the region in a way that had been impossible hitherto. Up to this time the principal trade in the Illinois had been conducted by Canadian and Louisiana merchants, the English colonists having found their way north of the Ohio, only just previous to the outbreak of the last war. But now the opportunity was opened to the eastern merchants and they eagerly seized upon it, thus bringing on a commercial war for trade of the Ohio and the Mississippi. In this

the merchants of the English colonies had one decided advantage, since they could deliver goods at the villages of the Illinois cheaper than the same could be purchased and brought by way of the lakes and the Wabash or up the Mississippi."

In making this last statement Professor Alvord evidently had in mind the use of no other route than that up the Mississippi or the one by way of the Wabash.

Then follows an account of the British invasion, with the names of the chief merchants and the houses they represented, such as Morgan, Kennedy, and so forth.

3738 (Reading) page 29, Roman:

"In the first years of the British rule it looked as if the Ohio river would become the great trade route of the region and supplant the older and, with the French, more popular waterways to New Orleans and Canada. Even the British government seems to have approved at first this attempt to turn aside the trade from its older channels, for in 1769 the colonial governments were empowered to appoint officers to superintend the Indian trade, and Fort Pitt and the Illinois were assigned to Pennsylvania. Thus the Indians north of the Ohio became accustomed to Fort Pitt as the seat of authority in matters in which they were vitally interested."

And I omit again approximately a page and read from page 30, Roman numerals (reading):

"Although there was at times considerable complaint against the British commandants by the merchants and land traders, these were generally favored more than the French inhabitants or the Canadians, until the passage of the Quebec Act in 1774, which united the Illinois territory with the province of Quebec and annulled any special favors and privileges which the merchants from the east may have enjoyed. This act and the cancelling of the land purchases, which proved the intention of the British government to carry out the principles enun-

3739 ciated in the Edict of 1763, were discouraging to the enterprises of the representatives of the Eastern colonies, and from that date their number in the Illinois began to decline and trade turned back to the older channels."

In the statement last read the reference is obviously primary to the Wabash channel and possibly the other, down the Mississippi to New Orleans. So far as the trade between

the Illinois country and Canada is concerned, to the former passage by way of the Wabash.

(Motion to strike out conclusion of the witness; passages speak for themselves.)

(Motion by counsel for defendant to strike out all the conclusions of the complainant's witnesses on the same ground.)

3740 Professor Alvord wrote that article, according to the preface, in May, 1907.

I now call attention to the volume entitled *The Illinois Country* by Clarence Edwin Carter, which has heretofore been identified and used in the case.

3741 Carter was a teacher in The Illinois College at Jacksonville and a graduate student in the University of Illinois when this work was written; it was done in connection with work at the University. In his preface he acknowledges his obligation to Professor Greene, the head of the History Department, and especially to Professor Alvord, whose intimate knowledge of the field has been of material assistance throughout his study.

3742 This book won the Justin Winsor prize of the American Historical Association for 1908. These prizes are only open to men who have not yet acquired a broad reputation for publications; that is, to younger men in the field of historical research. Carter's work would be regarded as that of a specialist in the field of American history, done under the direction and oversight of specialists. For the rest it would be judged on its merits the same as any other work. It seems to me to be a very excellent study.

Professor Charles H. Hull of Cornell University is the chairman of the committee which awarded this prize; the other members are men chosen for their reputation as historians in the field of American history and their ability to judge essays, and they passed on and approved this production.

3743 Speaking from memory, the privilege is reserved of not awarding this prize in any year unless the best essay submitted comes up to a proper standard of historical excellence.

Objection to last statement, not the best evidence.

3744 I first call attention to Chapter 5 of Carter's volume, pages 77 to 103, the title being, "Trade Conditions in the Illinois Country, 1765-1775." The part on pages 81 and

82 of Carter has been read into the record by Mr. Lee, at transcript pages 3550-3552 (Abst., 1343-1344).

I call attention further to the citation on page 86 (reading): "It had been expected that the Illinois villages would be the center of trade for the English side of the upper Mississippi valley," and so forth, which appears at transcript pages 3553 to 3554 (Abst., 1345-1346).

3745 I read footnote 32 on page 88 (reading):

"Gage to Hillsborough, November 10, 1770, P. R. O., Am. and W. I., vol. 125; Hutchins, 'Remarks upon the country of the Illinois, 1771,' MS. in Hist. Soc. Pa. Library. It may be noted that during the French Regime the French-Canadians traded extensively in this region. See Gage's 'Report on the state of the government of Montreal,' Can. Const. Docs., 1759-1791, 69-72."

I now read from page 89 (reading):

"This state of affairs continued throughout the greater part of the period, although it was probably modified to some extent after 1770. In answer to a number of vigorous protests from General Gage, O'Reilly, the Spanish Governor of Louisiana, issued an order to all the commandants in that colony to prohibit
3746 the inhabitants crossing the river in the pursuit of trade and whenever any excesses were committed to give satisfaction to the English commandant according to the laws of nations."

I refer to the next paragraph on page 89, beginning "During the first years of the British occupation," which appears in the record pages 3555 to 3558 (Abst., 1346-1348).

I read further from page 93 (reading):

"In 1768 some steps were taken toward the better regulation of the trade. In that year Captain Forbes, the commandant at Fort de Chartres, issued a placard forbidding the traders to send any peltry down the river without informing the commandant of the number of packs, and at the same time giving a bond of two hundred pounds sterling that they would land them in a British port. At the same time General Gage served notice on Governor Ulloa of Louisiana to prohibit the inhabitants of that province from going up the Illinois, Ohio, and Wabash rivers. The commandant at Fort de Chartres was then given directions to scour the river with armed
3747 boats, and to make prisoners of all persons acting con-

trary to the order of Don Ulloa and to carry them to Fort Pitt."

I now refer to the excerpt on page 93 of Carter, beginning, "Conditions, however, grew no better as time went on," appearing at transcript pages 3558-3559 (Abst., 1348), and to the citation from Carter, page 94, record at transcript pages 3563 to 3566 (Abst., 1350-1352).

I now read from Carter, page 99 (reading):

"At one time it was the hope of such men as Gage, Johnson, Haldimand and Hillsborough that the opening of the Iberville River would prove feasible, thus enabling English vessels to reach the British ports of West Florida through lakes Maurepas and Pontchartrain without going by way of New Orleans. This would necessitate the maintenance of a post at the junction of the Iberville and Mississippi rivers in order to turn English boats into the proposed channel. Numerous surveys were made and at one time the work of clearing the channel was actually begun.

3748 None of these projects, however, was ever adopted. One of the principal reasons for this apparent neglect may well be summed up in a statement by Hillsborough, who appeared by 1770 to have given up the hope of any immediate advantages from the West. He declared in that year that under existing conditions, 'Forts and Military Establishments at the Mouths of the Ohio and Illinois rivers, admitting that they would be effectual to the attainment of the objects in view, would yet, I fear, be attended with an expense to his Kingdom greatly disproportionate to the advantage proposed to be gained.

The matter of expense was not the only reason why the government refused to adopt any of the schemes suggested for the betterment of western conditions. The ministry had in mind a different plan, which if carried out would have completely changed the situation. The idea of the conquest of Louisiana from Spain was kept in mind during the greater part of the period under consideration and received more serious thought than perhaps any other western plan. Much of the correspondence between Gage and Brigadier Haldimand, the English commander in West Florida, related to the best method of attacking New Orleans, and many official and private letters also contained expressions favorable

3749 to such a move. In 1770-1771, when the Falkland Islands dispute was about to drag England and Spain into war, the opportunity had apparently come for the proposed conquest. Early in 1771 Secretary Hillsborough issued orders to Gage in New York to mobilize an army and prepare for an immediate descent upon New Orleans by way of the Ohio and Mississippi rivers. Gage's preparations, however, were never completed, for the question at issue was settled peacefully.

In the beginning Great Britain had hoped to realize in the development of the fur trade one of her chief returns for taking over the western country. But her traders found the French hard to dislodge. The character and methods of the French fur traders appealed to the Indians, and England's failure to realize more from the trade may be traced in part to this cause. Moreover, that portion of the western trade which went to the English centered in a large degree in a foreign port. With the means at hand attempts were made to check this tendency, and numerous plans were projected to induce a change of conditions, but no expensive measures were undertaken. The problem of the western trade confronted the ministry at a most unfortunate time, for during the decade following the treaty of Paris questions of graver importance were arising and demanding immediate attention. The necessity became apparent of increasing the revenue for purposes of imperial defence and of colonial administration, and the question of the readjustment of all the relations between
3750 the mother country and the colonies was thereby introduced. When the colonial opposition to Parliamentary taxation manifested itself in the outcry against the Stamp Act and other revenue measures, the expenditure of large sums of money on new projects was out of the question. Instead of seeking new schemes upon which to expend money, every opportunity was seized upon to curtail expenses. We find that not only was the plan for the management of Indians outlined in 1764 never put into full operation because of the added financial burden which it would entail, but also that in 1768 the management of the trade was transferred from the crown to the colonies in order that the budget might be further reduced. The western question had become subordinated to that of the empire. Furs were important

to the manufacturing monopoly of Great Britain, but at this time of rising discontent in the colonies any new projects entailing further expense were out of the question."

I call attention to the citation from page 141 of Carter, beginning, "There was still another important reason," and so forth, ending "with any advantage to England, unless New Orleans were procured," appearing on transcript page 3567. (Abst., 1352-3.)

I now read from Carter, page 141. (Reading):

3751 "In a communication to Secretary Hillsborough in 1770, in which he argued at length against the establishment of settlements or of any additional military posts in the West, General Gage declared that no further time or money should be expended on that country, and particularly the Illinois country, because it would be of no conceivable 'advantage to the King's subjects, unless New Orleans was added to His Majesty's Possessions.'

In the same year Lord Hillsborough himself mentioned one of the chief objections which he considered to 'lie against colonies in the Illinois with a view to the Peltry Trade, which is the peculiar Commerce of that Country.' "

I call attention further to the citation from page 142 of Carter, beginning with, "This Commerce," and concluding, "Can have any effect under such circumstances," appearing at transcript page 3568 (Abst., 1353).

I now read further from Carter, page 142. (Reading):

"In this connection it should be noted that throughout this decade there were serious thoughts of an attack upon Louisiana and New Orleans should a war with Spain afford the opportunity. One of the reasons offered by Governor Franklin in 1766 for the establishment of a colony in the Illinois country was that such a colony would enable the English to get possession of the whole of Louisiana 'should a future war make it expedient.' We find Gage himself discussing with General Haldimand, who was stationed in West Florida during the latter half of this period, possible plans for an attack in case war should be declared.

3752 In 1770 the cherished opportunity seemed to have arrived. In that year the dispute between England and Spain over the possession of certain of the Falkland Islands, lying near the Strait of Magellan, brought the

two nations to the verge of war. Hillsborough evidently expected war, for in January, 1771, he communicated secret instructions to Gage in New York to mobilize an army and to prepare for the invasion of Louisiana. He commissioned Gage as commander of the invading forces and instructed him to use his own judgment as to the time and method of attack. Gage replied that he would at once assemble a body of troops and prepare for the invasion. He further declared his intention of approaching Louisiana and New Orleans by way of the Ohio and Mississippi rivers, and actually sent reinforcements to Fort de Chartres. Soon after the despatch of Hillsborough, however, Spain acceded to the demands of England, and the attack upon New Orleans was given up."

I call attention to a citation from Carter, page 11, beginning, "The relation of the Illinois Country to Louisiana was economic as well as political," and concluding, "together with cattle and hogs they frequently shipped to the New Orleans market," appearing on transcript page 3550, (Abst., 1343-44).

3753 Footnote 33 on page 11, of Carter, refers to Winsor, *Narrative and Critical History of America*, Vol. V, page 53.

Turning to that volume I find the following, under the chapter headed "Canada and Louisiana." (Reading):

"During this uneventful time the little colony grew and the settlers enjoyed a moderate degree of prosperity. A contended population of about two thousand whites, to whom grants of land had been freely made for purposes of settlement or cultivation, was mainly engaged in agricultural pursuits. Side by side with them the natives were gathered in villages in which were established Jesuit Missions. The fertile soil readily yielded to their efforts at cultivation more than they could consume, and each year the surplus products were floated down to New Orleans. Bossu asserted that all the flour for the lower country came from Illinois. Vaudreuil, before leaving the colony for Canada, reported that boats came down the river annually with provisions; but as late as 1744 he still harped on the discovery of new copper and lead mines. Of the real agricultural value of the country there could not at that time have been any just appreciation."

Footnote 2 on page 53, of Winsor, reads:

"We receive from the Illinois," he says, "flour, corn, bacon, hams, both of bear and hog, corned pork and wild beef, myrtle and beeswax, cotton, tallow, leather, tobacco, lead, copper, buffalo wool, venison, poultry, bear's grease, oil, skins, fowls, and hides. (Martin's History of Louisiana, i. 316.)"

3754 I now call attention to the Journal of Jacob B. Varnum of Petersburg, Virginia, which is a typewritten manuscript belonging to the Chicago Historical Society. A letter belonging to the Chicago Historical Society gives the history of this document, and is as follows:

Objection, incompetent, irrelevant and immaterial.

3755 The WITNESS (reading):

"Dated Boston, May 16, 1907. Lib'n of the Chicago Historical Society. Dear Sir:—I respectfully enclose sample sheets of the 'Varnums of Dracutt,' a work of 308 pp. with 23 illustrations and 5 maps," and so forth.

3756 The letter goes on to describe the book. On the paper apparently in the handwriting of Varnum, the publisher, appears this notation (reading):

"The sketch of Maj. Jacob B. Varnum, who was among the U. S. officers who helped bury the bones of the victims of the Fort Dearborn massacre. I furnished in another form to Prest. Mason of your society who was a classmate of mine at Yale. Signed Jon. Varnum."

The manuscript purports to have been made out by Varnum during the Civil War, from papers and manuscripts in his collection, during the siege of Petersburg, Virginia. He expressly states that he has gone over his papers and manuscripts, as I recall it.

3757 Varnum was the government factor at Fort Dearborn from 1816 to the abandonment of the factory in 1822. This typewritten copy of that manuscript is a part of the Historical Society's collections. I think there can be no reasonable question that the manuscript referred to in this letter is the one I am introducing.

Objection, not sufficiently identified; not such a document as historians are entitled to use.

The WITNESS (continuing): I read from the manuscript entitled "Journal of Jacob B. Varnum, of Petersburg, 3758 Virginia," the entry beginning June 1819. (Reading):

"Some gentlemen of the place having business in Detroit, urged me to accompany them, and having no busi-

ness at this inactive season of the year requiring my presence here, I felt a strong desire for a change. Our summers were exceedingly dull and solitary here. We have nothing to exercise our bodies or divert our minds. The hunting seasons is necessarily suspended, and even the Indians are too inactive to leave their little plantations. During the hot months we have little else to do than fight mosquitoes. I had passed two or three summers in such listless idleness that the desire for a change entirely possessed me, altho' fully aware that a ride of between 300 and 400 miles thro' the wilderness in fly time would not be a very pleasant trip, I determined on trying it and made preparations accordingly. About the 10th of June we commenced our journey, going via Ft. Wayne."

Then follows an account of the journey from Chicago to Detroit.

3759 I read this to show that as stated in the citation it was exceedingly dull at Chicago in the summer time, the period to which Varnum refers, which I think has some bearing upon the complainant's proposition that there were some thousands of boats going by way of Chicago to St. Louis in the period indicated in the St. Louis Enquirer editorial.

3760 I read from the same manuscript the citation under date 1821, on the abandonment of the government factory at Chicago. (Reading):

"Since the renewal of the factory here the trading with the Indians had hardly been sufficient to justify its continuance. Many formerly traded at this point who now having bought hunting grounds more remote from the 'Chemokomans,' as they term the Americans, and their numbers being also greatly reduced by the late war, it has resulted in the business falling off more than one-half. Under these circumstances, actuated by the belief that the factory could not sustain itself, I thought it my duty to recommend to the superintendent its discontinuance or removal to some point more remote from the settlements, and named St. Peter's as a suitable point. Several communications passed between us and on the 30th of October, he authorized me to close the establishment and remove to that place early in the coming spring. That change did not go into effect, for reasons that will appear."

The reasons appearing for his not making the changes di-

rected were that another man was sent by the Government to close up the affairs of the factory, due, as Varnum
3761 states, to the prejudice that Senator Benton had excited toward the old agents of the government.

Under the heading September 25, 1821. (Reading):

"Received a letter from Brother Joseph, announcing the distressing event of the decease of both Father and Brother James the same day, Sept. 11, 1821. The balance of the year passed off as usual—trading with the Indians and occasional excursions to the hunting grounds. The latter part of the year I was winding up affairs preparatory to removal. I did not work very actively, however, for after the meeting of Congress, I noticed that Col. Benton in the Senate made a furious attack against the whole matter of Indian trading—representing that it benefited no one but those engaged in carrying it on."

Under entry of August 17, 1822. (Reading):

"Having turned over all the factory property to my successor, and my wife having embarked some days since by water around to Detroit, my mission in Chi-
3762 cago was ended and in company with Lt. Morris and guide, I left for a second journey on horseback to Detroit, intending to take the direct route thro' the woods."

I next refer to the article "Reminiscences of Early Days on Mackinac Island, by Elizabeth Therese Baird, 14 Wisconsin Historical Collections, page 17. Complainant has heretofore identified this volume.

Doctor Thwaites, of the Wisconsin Historical Society, identifies Mrs. Baird in a footnote on pages 17 and 18. (Reading):

"The author of these reminiscences was born at Prairie du Chien, Wis., April 24, 1810, the daughter of Henry Munro Fisher, a prominent fur trader, of Scotch ancestry, in the employ of the American Fur Company. Her mother was Marienne Lasaliere, a daughter of Madam Therese Schindler (wife of George Schindler), by her first husband, Pierre Lasaliere. Madam Schind-
3763 ler's mother was Migisan (although called by the French, Marie), the daughter of an Ottawa chief, Kewinaquot (Returning Cloud). In 1824, when but fourteen years of age, Miss Fisher was married at Mackinac Island, where she had spent the greater portion of her youth, to Henry S. Baird, then a young Green Bay lawyer. Mr. and Mrs. Baird removed at once to Green Bay, where

Mr. Baird (born in 1800) died in 1876, and Mrs. Baird, November 5, 1890.

3764 Mrs. Baird was a woman of charming personality and excellent education, proud of her trace of Indian blood, and had a wide acquaintance with the principal men and women of early Wisconsin. Having traveled and seen much in pioneer days, and being gifted with a retentive memory which did not fail her until the last few weeks of her long life, she was a rare source of information to western historical students. The present Editor frequently drew upon her memory, for data with which to annotate these collections. To the columns of the Green Bay State Gazette, between December 4, 1886, and Nov. 19, 1887, Mrs. Baird contributed a series of papers relating her early experiences on Mackinac Island and in Wisconsin territory. The present article is a collection of such of these papers as referred to Mackinac,—condensed at a few points, and otherwise edited, in accordance with an agreement between Mrs. Baird and the Editor, the former contributing for this purpose some information which did not appear in the series as originally published in the State Gazette. It is hoped that space for the remainder of Mrs. Baird's reminiscences—those relating especially to Wisconsin—may be found in Vol. XV of these collections.—Ed.”

Turning to the article on page 24 of the volume I read (reading):

3765 “In the fall of 1815, Madame Marie Chandonee, nee Chapoton, with her infant son, left Detroit to join her husband, Jean B. Chandonee, in Chicago. When she reached Mackinac, her child was too ill to travel further; and when he recovered, it was too late that season to resume the journey. Although it was only October, no vessel would brave the autumnal storms, and there was no alternative for Mme. Chandonee but to make Mackinac her home for the winter with her husband's aunt, Mme. Therese Schindler. Spring came and went, and not until the middle or last of June, 1816, did the first vessel present itself for this route. Then Mme. Chandonee, with her little one, accompanied by my mother and me, embarked again for Chicago. The vessel had the then familiar load of pork, flour and butter. I know not how long she was in going or coming; I only know

she was one month making the round trip, which was thought to be doing well.

There were no ports on the west side of Lake Michigan, at which to stop, but when we reached Chicago, there was considerable delay in getting into the river. It was a very narrow stream, with high banks of white sand. Not far up the river stood Fort Dearborn, only a few rods from the water's edge. Directly opposite the Fort was the Kinzie homestead, with all its comforts. The house was a large one story building, with an exceptionally high attic. The front door opened into a wide hall, that hospitably led into the kitchen, which was spacious and bright, made so by the large fire-place. Four rooms opened into the hall, two on each side, and the upper story contained four rooms. The fare of that house was all an epicure of the present day could desire, including game and fish of all sorts; and then the cooking was done by open fire place, in its best style.

We were entertained by the hospitable inmates of this pleasant home, Mr. and Mrs. Kinzie, father and mother of John H., being old friends of my mother. Mme. Chandonee was a stranger to the family; but her husband was an inmate of the household, being there in the employ of the government. The establishment consisted of Mr. and Mrs. Kinzie, two sons and two daughters, and the men and women retainers, who seemed to be many. This home, the garrison, and the home of Jean Baptist Beaubien, were all there was of Chicago at that time."

I here omit what follows in the way of description of conditions and the experiences of the visitor at Chicago, and continue to read again on page 27 (reading):

"We remained in Chicago for some time, the vessel master seeking for a cargoe which was not secured. It was too early for furs, so finally the vessel had to take on a ballast of gravel and sand. Besides ourselves, the party who took passage on this vessel, were Major Baker and his wife and daughter. The Major was then on his way to Green Bay to take command of Camp Smith. The daughter was an invalid and had what is commonly called 'fits.' She was seized with one in the cabin while I sat by her; and such an impression did her fright make that I have never forgotten Miss Jerusha Baker.

Pursuing our journey northward we coasted along the east side of the lake, stopping where we could, to secure,

if possible, a cargo; but failing, arrived at Mackinac with the same ballast with which we started from Chicago."

The WITNESS (continuing): I cite this as bearing upon the amount of trade at Chicago at the time of Mrs. Bairds' visit in 1816. It shows that the captain of the vessel found it impossible to secure anything by way of cargo for return voyage and had to ballast his vessel with sand and gravel.

3768 I now refer to DuPratz' History of Louisiana, the Chicago Historical Society volume, printed in London in 1774, which has heretofore been identified and used. (Reading, page 182):

"In those countries there is a river, which takes its name from the Illinois. It was by this river that the first travelers came from Canada into the Mississippi. Such as come from Canada, and have business only on the Illinois, pass that way yet; but such as want to go directly to the sea, go down the river of the Miamis into the Wabache, or Ohio, and from thence into the Mississippi."

I have examined the extract from Graham and Philips' report, appearing in Alvord's direct, transcript page 254, Abstract page 113, with the view of determining the light which it throws upon the question of the capacity or use of the Desplaines river for boats.

3769 Q. What are your conclusions?

Objection; no proper foundation; report speaks for itself.

A. Graham and Philips were sent by the government in 1819 to make a survey of certain boundary lines. (See Enquirer editorial, quoted transcript pages 240-242, Abst., 106.) Their commission had nothing to do with the question of

Canals, at least that is suggested by the report itself.

3770 See transcript page 254 (Abst., 113), first paragraph, and transcript 258 (Abst., 116). But they saw fit, whether at the instigation of Benton or not, to include a report to the government on this topic.

Motion to strike out the reference to Benton.

The WITNESS (continuing): They point out that the Desplaines river in high water is from four to six feet deep and in places a mile wide; and in low water is dry or reduced to a gutter. (See transcript page 255, Abst., 114.)

The period of high water is brief, while that of low water lasts for a considerable portion, if not the greater part of

the year, during which period, according to the report, the Desplaines is dry, or a gutter. After the canal is cut from the Chicago to the Desplaines, the report points out that two difficulties will still occur, one that the Desplaines during half the year does not contain enough water to float a boat. (See transcript page 256, Abst., 115.)

3771 It is evident from the report that boats sometimes used the Desplaines, but that for the greater part of the year it could not be used, and that either the channel must be deepened or the canal must enter at Mount Joliet in order to secure a navigable highway. This latter would cut out the greater portion of the Desplaines.

My knowledge as to the relative length of time during which there was not sufficient water in the river, is based upon the report and in part upon other references. The report itself states.

Motion to strike out last part of answer.

The WITNESS (continuing): The report itself states (Rec., 256; Abst., 115), that "during half of the year the Plein does not contain water enough to float a boat." That is in part the basis of my answer.

I have examined Drown's history of Peoria, and the excerpt referred to by Alvord in his direct, transcript at 301 (Abst., 138).

3773 I regard Drown's work as a history of flimsy character. Drown himself says in his preface, page 2 (readings):

"Unwearied efforts and untiring labor have been exerted to make it what it is, and what it is, with all its imperfections, is stamped upon its face. That it is entirely free from errors, is not expected; but it is believed to be as correct as, in the nature of things, it is possible, in the first instance, to make such a book, out of an unorganized mass of materials," (and this is italicized), "collected from every quarter, oral and written. Undoubtedly, many omissions will be observed of matters necessary to give completeness to the work. I shall be glad to receive from those who may notice errors, or omissions, the sum of their knowledge for future use, there being wisdom, generally, in a 'multitude of counsellors.' "

3774 The book may properly be regarded in the light of source material of a certain sort, and used with great caution as such by a historian. Its statements should be cor-

roborated by other sources, otherwise he would regard them as tentative or suggestive only. A mere statement in a book called a History does not establish a proposition as having occurred. It is necessary to determine how much the author knew about the facts concerning which he speaks, what his training was and what his prejudices may have been; in short to apply the customary historian's tests. If the book fails to meet these it will be open to suspicion to the extent to which it fails to meet such tests.

3775 I should say that the statement in Drown as to Hamlin's use of boats on the Illinois and Desplaines rivers, is either true or false, and the complainant in this case has urged that it is true. If it is true as to the use of the Desplaines in the way pointed out in the citation, it is equally true as to the use of the Illinois river after the date which Hubbard gives as that in which he abandoned the use of the Desplaines and the Illinois with reference to the operations of the American Fur Company. That is, whatever Drown says about the use of the Desplaines will have, it seems to me, the same validity as what he says about the operations of John Hamlin in 1825 and following. Hubbard pointed out that he gave up the use of the Desplaines before 1825. According to Drown the American Fur Company was still operating on the Illinois below the Desplaines at that time.

Motion to strike out as argument.

377 The WITNESS (continuing): That fact appears from this statement in Drown, page 84. (Reading):

"In 1832, an Indian Agency was opened and established here by the government, of which Judge Latham was appointed Agent, in place of Maj. Graham of St. Louis, where it had heretofore been kept. John Hamlin, Esq., was a clerk in and kept a branch of the American Fur Company's store in this place, in one of the buildings in the center of the view between Water street and the Lake—the building from the right, just below the Inn sign post. In this store were kept Indian commodities chiefly. A portion, however, was adapted to the wants of the citizens, who, at this time were few. Mr. Hamlin while thus engaged in this store, exported the first produce to Chicago in 1825."

3778 Complainant's witness, Alvord (Trans., 301-303; Abst., 138-139), has referred to a use that McCulloch has made of Drown. As to whether such a use would add to the weight of Drown's statement, will say if a historian

of an established reputation such as Justin Winsor, adopted such a statement and gave credence to it, there would be some implication that it was correct. It seems to me that in this case no such implication follows; McCulloch has not such a reputation as Winsor. Any historian would much prefer to go direct to Drown to form his conclusions rather than depend upon McCulloch.

Motion to strike out; qualifications of witness to pass on McCulloch not shown.

The WITNESS (continuing): McCulloch was a resident of Peoria, and once delivered a lecture before the Chicago Historical Society on Early Days of Peoria and Chicago.

3779 Further than that I have never heard of him. The fact

that he had delivered a lecture before the Historical Society would not necessarily give weight to his statements. The Historical Society does not stand sponsor for anything delivered before it in such fashion. The statement that McCulloch relied on Drown, so far as I can determine, rests on an inference only. In his lecture he gave no indication of the source of his authority. Assuming that he did rely on Drown, he has not used the authority accurately. He added certain details and made one statement, which differs from that which appears in Drown. I refer to the use of Mackinaw boats where Drown spoke of Durham boats.

3780 The letter of Robert Dickinson to the Honorable Robert Hamilton, appearing on transcript pages 210 and 211 (Abst., 89-90), beginning "The Communication between Mackinac and the Mississippi is carried on by two routes, the one by Chicago, the other by the Fox and Ouisconsin Rivers, the latter is preferred on account of the shortness of the carrying place," does not throw any light upon the use of the Desplaines river. My recollection is that the length of that portage varied somewhat from season to season, but in general it was from one to three miles.

Referring to DuPratz, to whom I have referred, and of whom Mr. Alvord has said (Trans., 152; Abst., 65) his standing as an author is most excellent, being a scholar and a historian and a man of good observation, and the passage he read from page 182 beginning

"In those countries there is a river, which takes its name from the Illinois. It was by this river that the first travelers came from Canada into the Mississippi. Such as come from Canada, and have business only on the Illinois, pass that way yet; but such as want to go

directly to the sea, go down the river of the Miamis into the Wabache, or Ohio, and from thence into the Mississippi."

3782 I have studied the excerpt. The translator (whose name does not appear) makes these statements which concern the author's standing and accuracy.

Objection, not shown that translator was qualified to speak on the subject.

The WITNESS (continuing, reading page 1):

"But whatever opportunities our author had of gaining a knowledge of his subject, it must be owned, that he made his accounts of it very perplexed. By endeavoring to take in everything, he descends to many trifles; and by dwelling too long on a subject, he comes to render it obscure, by being prolix in things which hardly relate to what he treats of. He interrupts the thread of his discourse with private anecdotes, long harrangues, and tedious narrations, which have little or no relation to the subject, and are of much less consequence to the reader. The want of method and order throughout the whole work is still more apparent; and that, joined to these digressions, renders his accounts, however just and interesting, so tedious and irksome to read, and at the same time so indistinct, that few seem to have reaped the

3783 benefit of them. For these reasons it was necessary to methodize the whole work; to abridge some parts of it; and to leave out many things that appeared to be trifling. This we have endeavored to do in the translation, by reducting the whole work to four general heads or books; and by bringing the several subjects treated of, the accounts of which lie scattered up and down in different parts of the original, under these their proper heads; so that the connection between them, and the accounts of any one subject, may more easily appear."

The extract from DuPratz, cited by Alvord, is not accurate. The first travelers of whom we have any record who came from Canada into Mississippi, were Joliet and Marquette, who came by the Fox-Wisconsin route. Assuming that DuPratz meant to state generally that the early travelers between Canada and the Mississippi region came by this route, it has no great significance as to the Desplaines, because travelers from Canada to the Mississippi who came to the

3784 lower end of Lake Michigan had a choice of two routes, by Chicago and over to the Illinois, or by the St. Joseph

and the Kankakee. DuPratz merely says that there was travel between Canada and the Mississippi by way of the Illinois; he makes no statement about the Chicago or the Desplaines. DuPratz, having spent some time in Louisiana, would probably have such knowledge as was current in Louisiana at the time of his residence, concerning the route or routes by which communication between Canada and Louisiana was carried on. It seems to me apparent, from the narrative, that he had no personal or detailed knowledge as to the use of the Illinois river and that portion of the route.

3785 I call attention to page 181. (Reading):

"The country of the Illinois is extremely good, and abounds with Buffalo and other game. On the north of the Wabache we begin to see the Orignaux; a species of animals which are said to partake of the buffalo and the stag; they have, indeed, been described to me to be much more clumsy than the stag. Their horns have something of the stag, but are shorter and more massy; the meat of them as they say, is pretty good. Swans and other water fowl are common in these countries."

It is evident from this that DuPratz was not himself familiar with the country of the Illinois. He says: "We see the Orignaux on the north of the Wabash," and then in describing this animal it is clear he depends on the evidence of others. He says. "They have indeed been described to me." "The meat of them is as they say, is pretty good." My conclusion is that he himself had not been in the country north of the Ohio. DuPratz furnishes merely a second-hand statement to the effect that travelers passed from Canada to the Mississippi by way of the Illinois, but those who go to the sea use another route by the Wabash, and it indicates

3786 nothing as to the Desplaines or how they got from Lake Michigan to the Illinois. The frontispiece map of DuPratz is not geographically accurate with reference to the Illinois and Chicago rivers and the region north of the Illinois, particularly the passage from Lake Michigan to the Mississippi by way of the Fox river route. This, to me, is a further indication as to lack of first-hand knowledge on the part of Du Pratz of the country to the north of the Ohio. It shows a river at the southwest corner of Lake Michigan, which evidently we would call the Desplaines today. It appears to rise some distance to the south of the southernmost point of Lake Michigan. It is not clear where the river which may stand for the Calumet or perhaps the south branch of the

Chicago ends, and the other river which I would identify with the Desplaines begins. The map does not accurately
3787 represent the conditions as to water connections between the Illinois and the lake by way of the Chicago and the Desplaines or the Calumet and the Desplaines as the case may be.

In Alvord's testimony (Trans., 260; Abst., 117) there is a reference to "A Pedestrious Tour of 4,000 Miles through the Western States and Territories during the winter and Spring of 1818, by Eastwick Evans, Concord, New Hampshire, 1819," and a statement quoted from Dr. Thwaites as to who Evans was. There is a statement from Evans (Trans., 261; Abst., 118), as follows:

"There is a communication, between the Illinois River and Lake Michigan, by way of Chicago river and two small portages. The Illinois strikes the Mississippi about twenty miles above the Missouri, and its principal branch runs in the direction of Detroit."

3788 Evans describes the Illinois country generally. It does not appear from his account what parts he went through nor that he went up the Illinois river. It cannot be stated, I suppose, that he did not, but I find no evidence to show that he did. I therefore regard his statement as secondary.

3789 On page 179 of the Chicago Historical Society, Concord, New Hampshire, 1819, copy of Evans, I find the following:

"The principal river in Indiana is the Wabash. The banks of this river are high and fertile, and its aspect very beautiful. It is navigable, at certain seasons of the year, upwards of six hundred miles. White, Theakiki and Calumet rivers are its greatest tributaries."

From that I conclude that if Evans went up the Illinois and was familiar with the country at the south end of Lake Michigan he was not an accurate observer, or at least, a careful recorder of his observations.

At page 223 of the transcript (Abst., 96) appears a letter of Thomas Forsyth to Eaton, in Vol. 11, Wisconsin Historical Collections, page 344, dated St. Louis, September 18, 1814, which gives the list of available Indians, and says that the Ottawas of Lake Michigan in their birch bark canoes can be easily brought down by way of the Chicago and Illinois river.

3790 Very little significance is to be attached to that statement, so far as the use of the Desplaines is concerned.

The birch bark canoe is light and easily carried, and the Century Dictionary says boats large enough to hold four persons weigh sometimes not over forty or fifty pounds; also Indians going out on a war-expedition would not burden themselves with unnecessary baggage. They could come down by way of Chicago and the Illinois without using the Desplaines. It would be possible to carry the canoes the entire distance from the Chicago to the Illinois.

3791 To illustrate the truth of this statement I call attention to Marquette's account of his expedition in 1673 in Jesuit Relations, where he makes light of a portage of twenty to thirty leagues on the upper Missouri. Obviously it would be possible to make the portage from Chicago to the Illinois with similar ease. Would say that it is fair presumption that Forsyth was familiar with the conditions as to the navigability of the Desplaines. From other sources used in this case we know that the Desplaines at the time in question, from September 14th on, was ordinarily very low.

3792 Charlevoix, in a letter of September 17th, considered that the river could not be traveled in a canoe. In St. Cosme, it is said that there was no water in the river except in the spring. Forsyth must have been familiar with this condition, and since he speaks of an expedition this season, the date of the letter being September 14th, I infer he did not expect the Ottawas of Lake Michigan to paddle their birch-bark canoes down the Desplaines. They could come to the lower Illinois easily without actually floating down the Desplaines.

3795 At transcript, page 3714 (Abst., 1408) I stated that two qualifications on Charlevoix were found in Winsor, Vol. 4, page 358. By way of correction, only one is found on that page, and the other is on page 154 of the same volume.

At transcript page 3712 (Abst., 1407) I referred to certain extracts from Winsor's Narrative and Critical History, Volume 4, page 154, concerning Charlevoix. A motion to strike out my answer was made, on the ground that the passage referred to other and later historical works. It seems to me the objection is not valid. The passage on page 154, to which the objection applied, reads (reading):

"His Historie dela Nouvelle France follows the course of the French throughout the continent, but its more particular Characterization belongs to another chapter."

On page 358, the other reference to which objection was made, I call attention to this comment:

"Shea says: 'Access to state papers and the archives of the religious order to which he belonged, experience and skill as a practiced writer, a clear head and an ability to analyze, arrange and describe, fitted him for his work.'"

3796 It is extremely improbable that these qualities, to which Shea testifies, would desert him when he came to write his letters, which constitute the volume from which I was reading.

I would refer further to footnote 2 on page 358 of Winsor's Narrative and Critical History, Volume 4, which is a reference to the same paragraph from which I have just read, which says (reading):

"And the first place in time and importance among the contributions to the general history of Canada, of a date earlier than the present century, must be given to this Jesuit's *Histoire Et Description Generale de la Nouvelle France avec le Journal Historique d'un Voyage fait par l'Ordre du Roi dans l'Amerique Septentrionale*, which was issued at Paris in 1744."

Footnote 2 says with reference to this sentence (reading):

"There were two editions in this year; one in three volumes quarto, and the other in six volumes of small size, with the plates, folded. Cf. Sabin, Dictionary, Vol. III, p. 520," etc.

3797 I now take up volume 6 of this same book to which footnote 2 refers in the edition of 1744, and call attention to the second title page (reading): "*Journal D'Un Voyage Fait Par Ordre Du Roi, Dans l'Amerique Septentrionale*."

This is the exact volume which is referred to in the footnote which is referred to in the body of the text, to which objection was made on the ground that I was referring to other and later historical works.

Motion to strike out on the ground that the answer has no relevancy to the objection by counsel for complainant.

3798 That letter of Charlevoix is contained in this particular volume to which the footnote refers. This whole criticism is based on these six volumes, of which this is one. These letters were written in 1721 or thereabouts; they were published, however, in 1744 as part of this general work, and the criticism of the author, Stewart, refers to the whole work.

Recurring to the point of trade between 1764 and the approximate date of the editorial in the *St. Louis Enquirer*, and the weight to be given to the editorial referred to in Darby, I refer to volume 2 again, Historical Society Publications, Indianapolis, and the Bowen-Merrill Company, 1893.

3800 I refer to paper number 8, of this volume, entitled "Ouiatanon, a study in Indiana History. By Oscar J. Craig, A. M., Ph. D. Professor History and Political Economy, Purdue University, Lafayette, Ind. Indianapolis: The Bowen-Merrill Company, 1893."

Have not looked up Mr. Craig further than he appears in this article; he has been referred to as an authority by other historians, among others, Professor Alvord in his introduction to the Cahokia records, on page 16, Roman.

3801 This article consists of a history of the old Indian town which became the French garrison and trading-post of Ouiatanon. It throws light on the subject of trade between Canada and the Illinois country in the period in question (reading, page 327):

"Between 1671 and 1683, the time of the founding of the Confederacy, it is extremely probable that fur traders visited the state, but it was not until the Confederacy was broken up and the Indians had returned and relocated, that trading-posts were established. Ouiatanon, the subject of this sketch, was one of the first of these, on account of its favorable situation. It is located at that point on the Wabash where the lighter barks and canoes that were used in the carrying trade between Canada and the southwest by way of the Miami and the Little Wabash were changed for larger ones to be used on the deeper waters of the lower Wabash and the Ohio.

3802 A reference to the map of Indiana will show that by ascending the little Wabash the portage across the St. Mary's and the Maumee was very short.

This post was to the Indians and fur traders of that day the head of deep water navigation, just as in later years and before the days of railroads, Lafayette, only four miles above, it, was known as the head of steamboat navigation on the Wabash." * * * (Reading page 329):

"The French, in order to counteract the influence of the English and to keep their ascendancy over the In-

dians, established a military post at Ouiatanon in 1719 or 1720. Under date of October 28, 1719, Vaudreuil, Governor of Canada, wrote to the Council of Marine."

3803 * * * (Reading, page 330): "It is probable that the garrison did not reach the post before 1720. The exact location of this fort has been a matter of much dispute, but a careful investigation of maps and descriptions of the post, as well as the recent finding of material such as Jesuit crosses, vessels used in church service, belts, buckles and fragments of other military equipments, fix its position beyond a reasonable doubt. The French fort was placed upon the site of the 'sanded' Indian fort already described. Both French and Indian relics are found here, and although the surface of the ground has been considerably changed by the washing of the sandy soil, the general outlines of the fort may yet be distinguished by the careful observer. Port Ouiatanon on the site of the old Indian fort, the Ouiatanon town on the south side of the Wabash river and a few miles lower down, the Kethtippecanunk several miles above and near the mouth of the Tippecanoe river are not always clearly distinguished from each other by writers on early western history.

The description of the fort already quoted from a Canadian record, the description to be given later on by General Scott and by General Wilkinson are accurate when applied to the fort as located above, but will not apply to the other localities.

The first French commandant then at Ouiatanon was Dubuisson, but he was soon succeeded by Francois Morgan, a nephew of the Sieur de Vincennes, already mentioned, who at his uncle's death, succeeded to the title. Francois Morgan, the new Sieur de Vincennes, remained in charge of the fort for several years.

3804 At this time the French ruled their possessions in the new world from two centers, Canada and Louisiana. After Francois Morgan had succeeded to his uncle's title, he was induced by a consideration of three hundred livres, in addition to his salary as Lieutenant on half pay, to transfer his allegiance from the Governor of Canada to the Governor of Louisiana. Leaving Ouiatanon he proceeded down the river to the Indian village of Chipkawkay, and there established a military garrison. This was known for a long time simply as the Fort on the

Wabash. It is not until 1752, that we find the name Vincennes applied to it." * * * (Reading, page 338): "Colonel Croghan, while at Ouiatanon, described it as follows: 'The distance from Post Vincennes to Ouiatanon is two hundred and ten miles. This place is situated on the Wabash. About fourteen French families are living in the fort which stands on the north bank of the river. The Kickapoos and the Musquattimes, whose warriors had taken us, live nigh the fort on the same side of the river, where they have two villages, and the Ouiatanons have a village on the south side of the river. The country hereabouts is exceedingly pleasant, being open and clear for many miles. The soil is very rich and well watered. All plants have a quick
 3805 vegetation and the climate is very temperate. This post has always been a considerable trading place. The great quantity of furs taken in the country induced the French to establish this post, which was the first on the Wabash, and by a very advantageous trade they have been nobly recompensed for their labor.'

The footnote reference there being to Croghan's Journal, History of Kentucky, Butler (reading footnote):

"From the post Colonel Croghan passed on through the Indian tribes to Detroit, and there the permanent treaty was signed with Pontiac, the preliminaries of which had already been arranged at Ouiatanon.

In Hutchins' Topographical Description the following occurs: 'Ouiatanon is a small stockaded fort on the western side of the Wabash, in which about a dozen families reside. The neighboring Indians are the Kickapoos, Pyankeshaws and the principal part of the Ouiatanons. The whole of these tribes amount, it is supposed, to about one thousand warriors. The fertility of soil and diversity of timber in this country are about the same as in the vicinity of St. Vincent. The annual amount of skins and furs obtained at Ouiatanon is about £8,000. By the river Wabash the inhabitants of Detroit move to the southern parts of Ohio and the Illinois country. This route is by the Miami river to a carrying place, which, as before stated, is nine miles to the Wabash when the river is raised with freshets.' "

3806 I have looked up that reference in Hutchins and it is the same as quoted here.

The same article contains an account of the harrying of the Ouiatanon towns in 1790 by General Scott (reading page 343):

"Many of the inhabitants of this village were French, and lived in a state of civilization. By the books, letters and other documents found there, it is evident that place is in close connection with, and dependent on, Detroit. A large quantity of corn, a variety of household goods, peltry and other articles were burned with this village, which consisted of about seventy houses, many of them well finished."

Objection to this line of evidence, as incompetent, irrelevant and immaterial and unresponsive to the question.

3807 I now refer to paper number 11 in Volume 2, Indiana Historical Society Collections, title being, "Documents Relating to the French Settlements on the Wabash. By Jacob Piatt Dunn. Indianapolis: The Bowen-Merrill Company. 1894."

Have not looked up Dunn, but think he is the author of Dunn's Indiana in the American Commonwealth series, which is regarded as an excellent book. In Volume 2, Illinois Historical Society Collections, edited by Professor Alvord, Roman 16, footnote 2, there are references to Dunn.

3808 Carter's, the Illinois County, heretofore used in this case; in the critical bibliography, page 198, under the heading, "State and Local Histories," says: "Dunn, J. P., Jr., Indiana: A Redemption from Slavery. Boston and New York, 1888.—Fair. Has not used all the available material." Evidently, he is the man to whom I referred.

On page 191 of this Critical Bibliography under "Printed Sources," is a reference as follows:

"Thwaites, Reuben Gold, ed., The Jesuit Relations and Allied Documents, vols. LXX and LXXI. Cleveland, 1900-1901.—Contain a few documents of importance for present study. Notes not all trustworthy."

3809 Also, I find:

"Thwaites, Reuben Gold, ed., Early Western Travels, 1748-1846, vols. I and XXVII. Cleveland, 1904 and 1906—Croghan's 'Journals' and Flagg's 'The Far West' are the most important documents. Notes to be used with care."

3810 Returning to Dunn's Indiana at page 435, occurs this document, which consists of a tabular view of the route

as indicated from Detroit to the Illinois by way of the forts named in the title (reading):

"The road from Detroit to the Illinois, by way of the forts Miami, Ouiatanon and St. Vincent with some remarks."

Footnote 1 (reading):

"This itinerary is not dated, but is deposited with papers of the year 1774, and was probably prepared in that year."

(Reading page 436):

"To Ouiattanon Fort, 18, the figures being miles. This fort is on the right about 70 yards from the river, the Ouiattanon Nation of Indians is on the opposite side, and the Kiccaposses are round the fort, in both villages about 1000 men able to bear arms. * * * From Fort Ouiattanon down the Ouabache to the river Vermillion, 60 miles. N. B. This river is on the right & at some seasons is navigable for boats about 120 miles. A mile up it is a village at Piankshaws of upwards of 150 men. Three miles.

To the highlands or Old Boundary between Canada and Louisiana, 57 miles.

To Fort St. Vincent, 120 miles. To the Illinois by Land the road is chiefly through plains and Extensive Meadows, 240 miles."

And then the whole distance is totalled up from Detroit to Illinois, 879 miles (reading):

"N. B. The above distances are all computed.

The road from Detroit to Fort St. Josephs by land & from thence to the junction of the Illinois river with the Mississippi by water.

From Detroit to the river Huron or Haudewine Sippy, 40 miles.

N. B. There is a village of Puttawattamees of six large Cabans—the river at this place is about fifty feet wide & the water is generally from one and a half to two feet deep, when there are floods travelers are obliged to make rafts to cross it—The road to this place is bad.

To the Salt River or Wandayon Sippi, 12 miles.

N. B. There is another village of Pittawattamees of five Cabans—this river is never so high as to prevent people passing it.

To one of the Branches of Grand river or Washtanon, that falls into Lake Michigan, 60 miles.

There is another village of Pittawattamees of eight large Cabans. Total 112 miles."

And then I pass over a portion of this table, this simply continuing the details of the routes, the distances, etc., in the fashion of the portion I have just read, until I come to this point on page 438 of the document (reading):

"To the junction of this river with the Iroquois river, 150 miles. N. B: In this Fort is a village of 14 large Cabans of Mascoutains.

To the junction of this river with the Chicagou river which forms the Illinois river, 45 miles.

N. B. At the Fort there is a village of Puttawattamees of 12 large Cabans."

A footnote (No. 5) accompanies the word Chicagou, which reads: "the Des Plaines."

Coming to the conclusion of the document, occurs this:

"From Detroit to the Mississippi by way of the Illinois river, 833 miles."

3813 Objection, incompetent, irrelevant and immaterial.

The WITNESS (continuing): Going back and continuing reading from where I left off at the bottom of page 437: "There is another village of Pittawattamees of eight large Cabans," I continue from that point:

"To Reccanamaz river or Pussawpaw Sippy otherwise the Iron Mine river, 75 miles. N. B. There is another village of Pittawattamees of eight large Cabans, this river can not be passed in Freshes on Rafts, at other time 1 or 2 feet deep.

To the Prairie ronde, 30 miles.

N. B. There is a small lake of about 3/4 mile wide and 11 miles long, abounding with several sorts of Fish, such as Maskenongi, White Fish, &c.

To Fort Saint Josephs, 75 miles.

3814 N. B. There is a few Pittawattamees near the Fort the road after you pass the river Huron is very good being mostly on a small height of land & little wood till you come to St. Joseph's where you pass thro' about a mile long and another about six miles long.

From Fort Saint Josephe's you ascend that river to a carrying place, 12 miles.

From carrying place to Recankeekee river, 4 miles.

At this point begins the citation to the junction of this river with the Iroquois river, 150 miles."

Connecting the notes with the context, note 1 on page to Iron Mine River reads (reading): "The Kalamazoo—near Battle Creek."

Note 2 on Prairie ronde reads: "Prairie ronde—in the southwest corner of Kalamazoo county, Michigan. The township still bears that name."

Note 3, on Fort St. Josephs reads: "Near Niles, Michigan."

Note 4 occurring after "From Fort St. Josephs' you ascend that river to a carrying place," reads: "Site of South Bend, Indiana."

3815 Referring to Professor Alvords introduction to volume 2, Illinois Historical Collections, Volume 1 of the Virginia series, the statement on Roman 16, concluding, "for it was by the Wabash that the principal trade route between the western posts and Canada ran," I have examined the work and found no reference in that article, by Alvord, to a route by the Illinois and Lake Michigan or the Desplaines and Lake Michigan.

I next refer to the Basis of American History by L. Far-
rand, Vol. II of the American Nation Series, which has heretofore been identified by a witness for complainant, which refers to routes from the Great Lakes to the Mississippi basin (reading):

3816 "On account of the hostility of the Iroquois Indians, the portages from Lake Erie were not much used until the eighteenth century, but later became of great importance. On the west there was one well known and much frequented, the portage from the Maumee to the Wabash, which varied from eighty to twenty miles in length. Its eastern end is marked by the present town of Fort Wayne."

Motion to strike out; incompetent, irrelevant and immaterial.

The WITNESS (continuing): I now refer to Andreas' History of Chicago, Vol. I, 1812 to 185/. This has already been identified (reading page 67):

"Soon after the opening of the eighteenth century, this route to the Mississippi became so dangerous that it was gradually abandoned, and finally almost forgotten. The long war between Illinois and the Iroquois had made

the Kaskaskias fearful and timid. They were directly
3817 in the path of the enemy from the location of their village, which, lying far up the river, was first struck by their war parties on their raids into the country of the Illinois."

The WITNESS (continuing). This section deals with early explorations of the region about Chicago, including the explorations of La Salle, Tonty and others who were at Chicago in that period. Immediately before the section I have read, he refers to the letter of De La Source, who accompanied St. Cosme on his trip to the Mississippi, and speaks of the boy being lost and his fate. The passage I cited refers to the passage from Chicago or Lake Michigan to the Mississippi by way of the Illinois.

3818 Presumably, I would say, it was by way of the Desplaines and Illinois, for we know St. Cosme went that way, though I would make more careful examination to state that absolutely.

Referring to the boy who was lost, I read from Andreas, page 66 (reading):

"He was insane and utterly exhausted. The party returned to Chicago from the lower Mississippi early in 1700 and remained there until Easter, the letter of De La Source being written at 'Chicagou.' From the allusions made by St. Cosme to 'our people' before whom he said Mass on All Saints' Day, and with whom he 'passed the night at Chicagou', and also from his direction to 'Brother Alexander', who remained behind in charge of the Cache on the shore of Lake Michigan, to 'take some of the French who were at Chicagou', to aid him in his search for the lost boy, it must be inferred that the place had become of considerable importance, at the point of disembarkation from the lake, on the route from Canada to Louisiana; that it had become the residence of several French traders, and, during a portion of the year of the Jesuit Fathers connected with the Miami Mission."

3819 I read this to identify the route concerning which I was questioned. He is still talking about the route from Chicagou to the Mississippi by way of the Illinois.

La Source was one of the group of Seminary Missionaries who made the trip from Canada to the lower Mississippi region by way of the Chicago and the Illinois about the close

of the seventeenth century. They came up the Mississippi river to Cahokia across to Chicago by the Illinois making the last stake of the journey thirty leagues by land. The party returned from the lower Mississippi and remained there until Easter, that is, the journey referred to. Motion to strike out unless the source is specifically cited.

The WITNESS (continuing): I now read from Andreas, page 67 (reading):

“Two years later, in 1702, Fort St. Louis was abandoned as a military post. Then followed long and bloody wars between the French of Louisiana and their Illinois allies, with various tribes of the northwest, commencing with the Foxes of Wisconsin. Charlevoix says of the latter, during the early part of the eighteenth century, ‘The Outagamies, (Foxes) infested with their robberies and murders, not only the neighborhood of the Bay (Green Bay) but almost all the routes communicating with the remote colonial posts, as well as those leading from Canada to Louisiana.’ After the Foxes, came the Pottawatomies, who finally almost exterminated the old allies of the French, and the Chicagou route, formerly so often traversed by French Missionaries and traders on their way to the Illinois and Mississippi, was, as before stated, forsaken, if not forgotten.

Father Julien Bineteau, who preached to the Miami at Chicagou, died not long after the visit of St. Cosme, from sickness contracted while following the Indians on their Summer hunts over the parched and burning prairies. Father Francis Pinet, his companion, went to the great village of the Peorias, after the removal of the Kaskaskias, and there founded the Cahokia mission,—where he died soon after. Father Gravier, according to his promise returned to the village of the Peorias, where he was dangerously wounded, and descending the Mississippi, in search of medical treatment, died on the voyage in 1706. The labors of the French missionaries, and the attempts at founding French colonies in Louisiana, were no longer extended to the region north of the Illinois, and with the exception of a struggling village at Starved Rock, even the once powerful Illinois had been driven by 1720, from all their villages above Peoria Lake. In that year Fort Chartres was built on the banks of the Mississippi, near the

two French settlements of Kaskaskia, and Cahokia,—a protection to both. About the year 1718, the Miamis were driven from the vicinity of Chicago, and in 1722, the Illinois villages at Starved Rock and at Peoria Lake, were besieged by the Foxes. Boisbriant, the commander at Fort Chartres, sent a force to their relief, which arrived after the contest had ended, leaving the Illinois victorious. So greatly had they suffered for years, however, from these constant attacks, that they returned with the French to the shelter of Fort Chartres, and with their abandonment of the river, the only protection to the route from Canada by way of Illinois to the French settlements was taken away. Charlevoix says of their victory and subsequent removal to southern Illinois:

3823 'This success did not, however, prevent the Illinois, although they had only twenty men, with some children, from leaving the Rock and pimitory (Peoria Lake) where they were kept in constant alarm, and proceeding to unite with those of their brethren (The Kaskaskias) who had settled upon the Mississippi. This was a stroke of grace for most of them, the small number of missionaries preventing their supplying so many towns scattered so far apart; but, on the other side, as there was nothing to check the raids of the Foxes along the Illinois river, communication between Louisiana and New France became much less practicable.'

In 1725, Boisbriant, the commandant at Fort Chartres, was made acting governor of Louisiana, and M. De Siette, a captain in the Royal Army, took his place at the Fort. Difficulties with the Foxes and their allies had been continually growing worse since the removal of the Illinois—the French being now more exposed to their attacks. The Colonists were murdered almost under the guns of the Fort, and the whole country of the Upper Illinois was a battle ground. De Lignerie was the French commandant at Green Bay, and labored assiduously to bring about a peace between the northern tribes and the Illinois. On the seventh of June, 1726, he assembled the Sauks, Winnebagoes, and Foxes at his post, and 'told them from the King, that they must not raise the war club against the Illinois, or they would have reason to repent it.' He was fairly well satisfied with the answer of the chiefs, and hoped the peace would

be stable; but De Siette, at Fort Chartres, had less confidence in the Foxes, for their word, and suggested to De Lignerie, that the best method would be to exterminate them, at once. De Lignerie while believing with
3824 De Siette that this would be the very possible method, if it could be carried out, feared the plan would not be a success, and that the Foxes, would 'array all the upper nations against us,' and 'the French of either colony be unable to pass from post to post, but at the risk of robbery and murder.' This had been the case too long, and the commandant at Green Bay advised the impatient De Siette to cause his people (The Illinois) if they have made any prisoners to send them back to the Foxes, 'as he has told the latter to do with their,' if their young men bring in any from the country."

On page 69 is an account of an interview at Chikagou which was destined not to happen, as things did not go well between the French and Foxes during the coming year. In August, 1727, M. De Beauharnais, then commanding in Canada, informed M. De Siette by letter at Fort Chartres, that he had determined to make war on the Foxes the coming Spring, and he gave the information that De Siette might make preparations and give assistance by disposing of the Illinois and French of the Mississippi to join the Canadians, finishing his letter by saying:

"It is reasonable to suppose that the people of Louisiana will come to this war with more ardor than the
3825 Canadians, as they are much more exposed to the incursions of the Foxes, who alarm and even kill them continually."

3826 (Reading):

"De Siette joined the Canadian forces at Green Bay the following Spring, and a battle ensued at Butte Des Morts, Wis., in which the French and their allies, the Illinois, were successful; but hostilities did not cease, and communication between Canada and the Mississippi by way of the Illinois river was as dangerous as before. For nearly half a century the name of Chicagou is not mentioned, and there is no record of any visit of a white man to the locality. DuPratz, an old French writer, and a resident of Louisiana, from 1718 until 1734, says of the 'Chicagou' and Illinois route in 1757: 'Such as came from Canada'"—

Here follows the citation from DuPratz already in the

record, at Transcript 3768 (Abst., 1429). On pages 180 and 181 is another passage from DuPratz (reading):

“Let us therefore now repass the Mississippi, in order to resume the description of the lands to the east, and which we quitted at the River Wabache. This river is distant from the sea four hundred and sixty (300) leagues. It is reckoned to have four hundred leagues. in length, from its source to its confluence into the
3827 Mississippi. It is called Wabache, though according to the usual method, it ought to be called the Ohio or Beautiful River, seeing the Ohio is known under that name in Canada, before its confluence was known; and as the Ohio takes its rise at a greater distance off than the three others, which mix together, before they empty themselves into the Mississippi, this should make the others lose their names; but custom has prevailed on this occasion.”

I have heretofore testified about DuPratz referring to his account of the Orignaux in the country lying north of the Wabash. I assumed that that referred to the country north of the Ohio. I had in mind this explanation which I have now read, that DuPratz as he said, the French at this time used the name Wabash, referring to the river which we call the Ohio. Returning to this citation (reading):

“The first river known to us, which falls into the Ohio, is that of the Miamis, which takes its rise towards Lake Erie.

It is by this river of the Miamis that the Canadians come to Louisiana. For this purpose they embarked on the river St. Lawrence, go up this river, past the
3828 cataracts quite to the bottom of Lake Erie, where they find a small river, on which they also go up to a place called the Carriage of the Miamis; because that people come and take their effects, and carry them on their backs for two leagues from thence to the banks of the river of their name, which I just said empties itself into the Ohio. From thence the Canadians go down that river, enter the Wabache, and at last the Mississippi, which brings them to New Orleans, the capital of Louisiana. They reckon 1800 leagues from the capital of Canada to that of Louisiana, on account of the great turns and windings they are obliged to take.”

Q. If you can summarize this subject possibly it would be well to do that now.

Objection; incompetent, irrelevant and immaterial; witness not qualified to draw a conclusion.

3829 A. Pointing out briefly the bearing of the citations upon this question of trade between Lake Michigan and the Mississippi by way of the Illinois route, in the period from 1764 down to the publication of the St. Louis Enquirer editorial which has been under discussion:

I call attention to the citations from Andreas showing that beginning about 1700, the use of the Desplaines route by the French, which had been comparatively frequent prior to that date, was abandoned, owing to the wars which have been referred to in that connection.

That DuPratz in his work published in 1757 or 1758 confirms in a way this account from Andreas, when he says that the Canadians who come from Canada to the lower Mississippi now come by way of the Wabash, having given up the Illinois route.

That Professor Carter in his account of the Illinois country from 1763 to 1774 in chapter 5, which deals with trade conditions between 1765 and 1775, shows that the bulk of the trade of the Illinois country in that period went down the Mississippi to New Orleans, as its outlet.

3830 Professor Alvord's introduction to the Cahokia records points out that there was some connection with Canada in the period especially from 1778 to 1790; but as I infer to some extent also prior to the first date there was some connection. But the principal route was by way of the Wabash, and he makes no mention, whatever of travel by way of the Illinois-Chicago or Desplaines route.

I have nothing to say about the period from 1790 to 1804, except that in a general way all trade was under the control of the British who had supplanted the French in carrying on the fur trade of the northwest.

From 1804 to 1812 John Kinzie was at Chicago and came to control a large part of the trade of the surrounding region. He relied mainly on horses in the conduct of his business. Forsyth, Kinzie's partner, was stationed at Peoria, hence the control of the firm of fur trade between Peoria and Chicago was doubtless considerable. From 1812 to 1815, the war between the United States and Great Britain was going on, and Kinzie's establishment at Chicago was abandoned, as was Forsyth's at Peoria, and it is a fair

inference that there was very little fur trade carried in this period.

This brings us to the approximate date of the editorial, and it is on the foregoing line of reasoning that I base my conclusion that the interpretation that thousands of boats such as were described in the editorial passed over from Lake Michigan to the Illinois in that period, is strained and exaggerated.

3832 I brought in the article on Ouiatanon by Craig, and this document which is given us by Dunn, including the reference in Hutchins Topographical Description, as to the trade by way of Ouiatanon and the Wabash route, as throwing further light upon the existence of that trade route and the use that was made of it in that period; and especially that the title of the document, "The road from Detroit to the Illinois," and its contents show that was a well known route during that period, the probable date of the document being 1774 as given by the editor. It is other and additional lines of evidence to show what Alvord stated in his introduction to the Cahokia records, that the principal trade relations between the Illinois country and Canada in 3833 this period was by way of the Wabash.

Q. There have been numerous references to the Illinois route or by way of the Illinois. In view of this route as laid down from Detroit by way of the St. Joseph and the Kankakee, when we merely find a reference to a route by the Illinois for a journey by the Illinois, can it be fairly inferred that that journey was made by the Desplaines and the Chicago?

Objection; each reference to the Illinois to be judged by context and no general statement concerning inferences is proper.

COUNSEL FOR DEFENDANT. There are statements in which the context shows nothing as to the route, wherein the mere statement is in substance that the trip was by the Illinois.

A. One must know the detailed circumstances. When Forsyth refers to the Ottawa Indians, who can easily come with their birch bark canoes to the defense of the Illinois, it would seem probable that he may have had this route in mind. Generally, it seems to me no such inference can be drawn, but one must take into account the circumstances surrounding each reference.

3834 Assuming that a man at Cahokia intended to send goods east "by way of the Illinois" I would be inclined

to say that no inference could be drawn from that fact alone, that the intention was to send it by the Desplaines and Chicago, in view of the fact that this document shows that the route by way of the Kankakee and further, as indicated in the document itself, is specifically detailed and therefore a well known route.

3835 I have been asked to check up a reference which I made to Darby's Louisiana. I read from the title page (reading):

"A Geographical Description of the State of Louisiana presenting a View of the Soil, Climate, Animals, Vegetable and Mineral Productions; Illustrative of its Natural Physiognomy, its Geographical Configuration, and Relative Situation; with an account of Character and Manners of the Inhabitants. Being an Accompaniment to the Map of Louisiana by William Barby. Printed for the author and published by John Melish, Philadelphia. J. Bioren, Printer. 1816."

I read from the preface, pages four and five, Roman notations (reading):

"But little knowledge of Louisiana can be gained from the perusal of works published in Europe. From national prejudice and want of accurate material, Trans-Atlantic writers, when treating on any part of America, almost uniformly mislead rather than instruct. From the former censure Count Vergennes must be excepted; this enlightened and liberal statement in his memorial presented to the French Government, in the early part of the American Revolution, does ample justice to the American character; but in local knowledge, no more correct than most European authors on that subject, yet evinces a very limited knowledge of the position, and relative importance of places."

3836 This volume was written to accompany the map of Louisiana by the author and there is a further account of this map in the form of attestation printed in the book, which I have heretofore referred to (Abst., 1410) two, by Thomas Jefferson and James Wilkinson. I have previously used the Public Library copy; I now have the Chicago Historical Society copy. The attestation of Thomas Jefferson does not appear here.

There are others.

3837 First, William C. Claiborne, who was a lawyer; settled in Tennessee; in 1796 helped to frame Tennessee constitution; member of Congress 1797 to 1801; appointed Gov-

ernor of Mississippi Territory in 1802; Commissioner with Wilkinson to take possession of Louisiana when purchased by United States. First Governor of Louisiana under United States 1804, and when state was organized was Governor from 1812 to 1816. Later, he went to the United States Senate. He had abundant opportunity to familiarize himself with the geographical conditions of Louisiana. I read his testimonial to Darby's map (reading):

"The undersigned has examined a map of the State of Louisiana by William Darby, of the County of Opelousas, which has long engaged the attention of that gentleman, and is believed for the most part, to be the result of his personal observation.

The undersigned cannot vouch for the entire accuracy of this map, but as far as his local knowledge enables him to judge, the work appears to be faithfully executed, and to present an accurate view of Louisiana. Given at New Orleans, on the 29th of June, 1816.

(Signed) William C. C. Claiborne."

Further, from General Andrew Jackson, afterwards President Jackson, who fought the British at New Orleans, and in general was qualified to speak of the geography of this region (reading):

"I have no doubt, whatever that Mr. Darby's map of Louisiana is more correct than any which has been published of that country.

He has certainly taken extraordinary pains to acquire correct information; and so far as my opportunities have enabled me to judge, I am induced to think his delineations very exact.

(Signed) Andrew Jackson, Maj. Gen. Com'g 7th Mil. Dis."

Further, from Edmund P. Gaines, who was a general in the United States Army (reading):

"I have examined Mr. Darby's map of Louisiana, and am of opinion that the delineations are faithfully drawn, and that it exhibits much more correct information of the topography of this country, than any map heretofore published, and I heartily concur in the opinions expressed by Maj. W. O. Winston, as above."

3839 Further, from James Wilkinson (reading):

"I have no hesitation to say, that from my knowledge of the country, and by the comparison with our original surveys made at great expense, and now in my pos-

session, that the map of Louisiana published by Mr. William Darby, is by far the most correct which is extant—particularly, in the important communications of the Iberville on the east, and the Fourche and Atchafalaya outlets on the west, with the Mississippi; and also the mouth of that river, and its general course and various inflexions.”

I would like to make a correction here; I overlooked the fact that Gaines' attestation ceased and General Wilkinson's began, so that I have been reading further from James Wilkinson's attestation. His attestation begins with the words, "I have no hesitation to say," and so forth. From there on what I have read is by James Wilkinson, signed "Philadelphia, April 19, 1816."

3840 I have previously spoken from memory as to the granting of prizes by the American Historical Association and their not awarding the prize unless the essay submitted was of sufficient merit. I read from a brochure of the American Historical Association dealing with the Justin Winsor prize and the Herbert Baxter Adams prize (reading):

"III. The monograph must present subject matter of more than personal or local interest, and must, as regards its conclusions, be a distinct contribution to knowledge. Its statements must be accurate and the author in his treatment of the facts collected must show originality and power of interpretation.

IV. The monograph must conform to the accepted canons of historical research and criticism.

It must be presented in scientific form.

It must contain references to all authorities.

It must be accompanied by a critical bibliography. Should the bibliography be omitted or should it consist only of a list of titles without critical comments and valuations, the monograph will not be admitted to the competition.

VII. In making the award the committee will consider
3841 not only research, accuracy and originality, but also clearness of expression, logical arrangement, and especially literary form. The successful monograph must be written in good English. The prize will not be awarded unless the work submitted shall be of a high degree of excellence."

Under Heading IX it appears that the Justin Winsor prize was offered annually until 1906, but from 1897 to 1899 and

in 1905 it was not awarded. I read further from the document (reading):

3842 "For the encouragement of historical research the American Historical Association offers two prizes each for \$200.00: The Justin Winsor prize in American History and the Herbert Baxter Adams prize in European history. Each is awarded biennially (the Winsor prize in the even years and the Adams prize in the odd years) for the best unpublished monograph submitted to the Committee of Awards on or before October 1, of the given year,—e. g. by October 1, 1909, for the Adams prize in European history, and by October 1, 1910, for the Winsor prize in American history. The conditions of award are as follows:

"I. The prize is intended for writers who have not yet published any considerable work or obtained an established reputation.

II. A. For the Justin Winsor prize.—The monograph must be based upon independent and original investigation in American history, by which is meant the history of any of the British colonies in America to 1783, of other territories, Continental or Insular, which have since been acquired by the United States, of the United States, and of independent Latin America. It may deal with any aspect of that history." * * *

3843 The composition of the Committee which passed upon Carter's Illinois country is as follows (reading):

"Charles H. Hull, (Chairman) Cornell University.
Williston Walker, Yale University.
John H. Latane, Washington and Lee University.
Claude H. Van Tyne, University of Michigan.
Theodore C. Smith, Williams College."

I now read from Carter's Illinois History, page 95 (reading):

3844 "Hutchins, 'remarks upon the country of the Illinois, 1771.' From New Orleans, where all the western trade finally centered, it was estimated that peltries worth between 75,000 and 100,000 pounds sterling were sent annually to foreign ports. Gage estimated it at 80,000 pounds sterling, Gage to Shelburne, January 17, 1767, B. T. Papers (Hist. Soc. Pa.), vol. XXVI. 'New Orleans remits one hundred thousand pounds sterling worth of peltry annually to France,' Baynton, Wharton and Morgan to McLeane, October 9, 1767, *ibid.* vol. XXVI."

Also on page 96 of Carter, footnote, 64:

"Gage to Johnson, January 19, 1767, Johnson Mss. vol. XIV, No. 23. Captain Forbes, commandant at Fort Chartres during part of 1768, wrote to Gage: 'As I am very sensible of the immense expense this Country is to the Crown and the little advantage the public has hitherto reaped by the trade with savages, and the reason is that the Inhabitants have continued to send their Peltry to New Orleans which is shipped from thence for Old France and all the money that is laid out for the Troops and Savages is immediately sent to New Orleans, for which our Subjects get French Manufactures. I hope, Sir, you will excuse me when I observe to Your Excellency, that the Crown of Great Britain is at all the expense and that France reaps the advantages.'" Forbes to Gage, April 15, 1768, P. R. O. Am. and W. I., vol. 124. Commandant Wilkins wrote the same year that 'the French of New Orleans are the sole gainers in this Trade and the public suffer greatly thereby,'" Wilkins to Gage, September 13, 1768, *ibid.*"

Further I read from page 98, footnote 72, beginning near the bottom of the page (reading):

"The merchant Morgan wrote from Fort De Chartres in 1768 that 'nothing is wanting but proper Posts at the Illinois River, St. Vincents and Manchac, a Civil Government and encouragement to Settlers from the Frontiers of Pennsylvania, Maryland and Virginia to make this a most flourishing Colony. Without these means taken 'tis not worth keeping possession of as to any immediate Advantage resulting therefrom, As the English Nation is now at the whole expence of maintaining the Country and France reaps all the benefits from the Trade. * * * Morgan's MS. letter book."

I now read from Vol. X, Michigan Pioneer and Historical Collection, pages 222 to 224, a letter from Governor Charleston to Sir William Johnson, dated Quebec, March 27th, 1767 (reading):

"Ever since my arrival, I have observed the Canadians with an attention bordering upon suspicion, but hitherto have not discovered in them either actions or sentiments, which do not belong to good subjects. Whether they are right or wrong in their opinion of the Indian Trade, I submit to those whom the King has appointed to direct and superintend the same, but the

3847

unanimous opinion of all here, Canadians and British, is, that unless the present Restraints are taken off, that Trade must greatly suffer, this Province, be nearly ruined, Great Britain be a considerable Loser, and France the sole Gainer, as they must turn the greatest Part of the Furrs down the Mississippi, instead of the St. Lawrence. They compute that or very large Quantity of Merchandise, formerly passed thro' this Province to Nations unknown to Pondiach, and too distant to come to any of our Posts, and that so much is lost of the consumption of British manufacturers. They say that their own Interests will allways be a sufficient Reason and Motive to treat these people well, and to use their utmost Endeavors to keep them in Peace, and the Canadians will engage to take some English in every Canoe, to acquire a knowledge of these Countries, and the Language, to shew they have no Jealousy at their becoming acquainted with this Trade. 'Tis imagined here, that the other Provinces, who are neither acquainted with these Countries, nor so advantageously situated for this Trade, are the secret causes of their being so severely fettered; they presume to think each Province should be permitted to avail itself of its natural Situation; and acquired advantages, and that it would be as unreasonable in us to expect the Posts to the Southward be shut up by Regulations, as long as ours are by a severe climate; that in this Respect all the King's Subjects should be considered as Brothers, or one Family, and that the Rivalship ought not to be between Province and Province, but between the King's Subjects and those of France and Spain; some have offered to prove, that two years ago, while they were confined to the Forts, the French or Spaniards from the Mississippi came within twenty Leagues of the Detroit, and carried off the very Furs, that were intended to clear off the Credit given the Indians the year before. They even assert 'tis impossible to prevent them from carrying off by far the greatest Part of that Trade unless those Restraints are taken off, they maintain that the only possible Means of preventing those Evils for the future, and of removing the Discontents of the Indians, for not being supplied with the necessaries of life as formerly, is to permit them to go among them as was the Practice of this colony, that thereby they will be enabled to under-

sell the Mississippi Traders, detect their Artifices, and be the means of bringing them to Punishment, as it is their Interest and duty so to do; but supposing the worst of them, they hope the King's Subjects of Canada are as much to be trusted, as the French from New Orleans, and ought to have the Preference, considering they carry up the British Manufacturers only."

3848 Carter's Illinois History, page 92, footnote 47, refers to Carleton's letter as follows (reading):

"Lieutenant Governor Carleton of Canada, complained that owing to the restraints on the fur trade in that colony, all the trade was going down the Mississippi, Carleton to Johnston, March 27, 1767."

3849 My attention is directed to Flint's History and Geography of the Mississippi Valley, referred to in Alvord's direct, Transcript 323 (Abst., 152). The particular statement being, "We have already remarked that at certain seasons of the year boats of five tons burden already passed through the morass," and so forth, from the Desplaines to the Chicago; and Mr. McLaughlin's interpretation, Transcript 784 (Abst., 327), "Taken in connection with the whole passage, this indicates to me the use of the Chicago-Desplaines route as an avenue of commerce."

Flint's work is general history and geography of the
3850 Mississippi Valley region. Flint lived in the west from 1816 to 1826, six years of this time at St. Charles, Missouri. He travelled widely and had been on the lower Illinois. His work shows evidence in some respects of careful and scholarly methods. His sources of information show personal observation and that information gained from contemporaries. Upwards of half the work is compiled from other standard books. "He claims no other merit than that of being a laborious and faithful compiler."

I quote from the preface Roman numerals, eleven (reading):

"Something more than half the compass of this work is original, in the strictest sense of the word, the remarks and details being the fruit of his own observation
3851 or reflection. What has been suggested by the reading and observation of those, who have preceded him in labors of this kind, will be generally found, he thinks, to have been assimilated, to use a medical term, and to have received in his mind the moulding of his own manner. But touching the matter obtained from other

books, he claims no other merit than that of being a laborious and faithful compiler."

(Reading):

"He has referred to at least thirty volumes, and to those, who might feel disposed to suggest, that he has made a book from the labors of others, he would beg leave to remark, that, if they shall be pleased to think, that they have found the substance of all these volumes in his work, he shall consider it the highest encomium they can pass upon it."

For geographical and topographical matter, he consults Charlevoix, Volney, Darby, Long, Schoolcraft, Beck, Cincinnati directories, Woodruff's Engraving of the city and so forth.

3852 Whatever Flint's care or industry, he was subject to liability to error so far as he relied on these various sources that any other compiler would be. That is, to the extent indicated, that is secondary account. Whether he had ever been at Chicago, does not certainly app. From his description of his journey up the lower portion of the Illinois, from the infrequency of visits to Chicago prior to 1826 and from the fact that there is no where any direct statement to the effect that Flint had been at Chicago, I think it may be fairly inferred that he had not. I am unable to find any prior remarks like the words with which he begins the statement as quoted, "as we have already remarked at certain seasons of the year boats of five tons burden already passed through the morass." There are none in his recollections published in 1826.

3853 As to his statement as to boats having passed and so forth, will say Flint nowhere gives references or authorities. The reader must accept his statement as having been weighed in his mind and admitted there as a matter of his own observation, or "on what he conceived to be competent and credible testimony of others." In support of which, I read, Roman numerals XII, Flint's Geography (reading):

"In reference to the second part of this work, it is from the obvious necessity of the case more simply a
3854 work of compilation, than the former. He has indeed brought every item of his own personal observation to bear upon it. But that observation in any individual case must be limited. He could not name if disposed, all the sources from which he has sought and obtained information."

And further from another portion of the same page (reading):

"He has not considered it necessary to give individual quotations, or to disfigure the margin with references and authorities. The reader ought to rely upon the fact, that nothing is here put down which has not been previously weighed in the author's mind, and admitted, either as a matter of his own observation, or on what he conceived to be the competent and credible testimony of others. Sometimes upon a particular point, he has adopted the phraseology of the author entire. At other times, he has adjusted the views of one author by another, endeavoring to settle a just medium from the result of his own observation."

There was a common impression at and prior to the time reflected in Flint that the Illinois river was navigable almost to the Chicago portage, which impression was retained all too loosely on anonymous authority. It grew in positiveness through dint of repetition.

3855 Finally, actual examination and experience proved this impression to be baseless. For example, the statement in Schoolcraft, 1821; of Tousey, in 1822; Kennedy in 1773, and the experience of the men who constructed the Illinois-Michigan canal. I conclude therefore, that Flint was probably misled by the prevalent and erroneous impression.

Motion to strike out as too loosely retained impressions; not responsible, stated without authority for the adjectives used by witness; is incompetent to give conclusion on the point.

3856 My attention is called to the reference to Gravier in the Jesuit Relations, Vol. 65, pages 101 to 103, and the statement by Alvord, transcript 118 (Abst., 51), referring to the passage from Gravier at page 117, which reads (reading):

"I received on my return from Michilimachinack, the letter that you did me the honor of writing to me, by way of the Mississippi, addressed to Father Aveneau, who sent it to me at Chikagoua,—whence I started in 1700, on the 8th of September, to come here,"

and Alvord's conclusion that this indicates that Gravier used the Chicago-Desplaines route in going to the Illinois country, as the Jesuits were accustomed to do. In my judgment, as a historian, I do not think that any such inference can be prop-

erly drawn from that passage. The letter reads, page 101 (reading): "Who sent it to me at Chikagoua, whence I started in 1700, on the 8th of September, to come here." The "here" evidently meaning a point lower down on the Illinois. There is nothing to indicate that they went down the Desplaines; it rests upon inference alone.

3857 Alvord says he (Gravier) used the Chicago-Desplaines route as the Jesuits were accustomed to do, but the date of the letter is 1700 and it was the preceding year St. Cosme came down from Chicago to the Mississippi, and the record he left does not show that they navigated the Desplaines to any considerable extent.

Marquette's account of his expedition of 1673, seems to make light of a portage of twenty to thirty leagues in the region of the upper Missouri. Such a statement must be taken into account in drawing an inference here as to the use of the Desplaines by Gravier.

59 Jeesit Relations. The Account of Marquette's First Voyage, 1673, translated by Thwaites, from the original French, page 141 (reading):

"Judging from the direction of the course of the Mississippi, if it continue the same way, we think that
3858 it will discharge into the Mexico Gulf. It would be a great advantage to find the river leading to the southern sea; towards California; and, as I have said, this is what I hope to do by means of the Pekitanoui, according to the reports made to me by the savages. From them, I have learned that, by ascending this river for five or six days, one reaches a fine prairie, twenty or thirty leagues long. This must be crossed in a north-westerly direction, and it terminates at another small river,—on which one may embark, for it is not very difficult to transport canoes, through so fine a country as that prairie."

Motion to strike out on ground that Alvord spoke with reference to use of Chicago-Desplaines-Illinois route.

Witness bases his answer on alleged failure to navigate.

3859 The WITNESS (continuing): St. Cosme did not return to Chicago. His associates in the party returned to Chicago in the spring of 1700, coming up the Mississippi to Cahokia and then by way of the Illinois, making the last thirty leagues of the journey by land to Chicago where they arrived much fatigued.

Objection to the testimony of witness in every instance where he undertakes to testify what a certain author said on a particular subject.

Motion to strike out on the same ground.

3862 The WITNESS (continuing): Thirty leagues down the Illinois from Chicago would be something less than ninety miles, approximately in the region of La Salle or Starved Rock.

In view of the objection by counsel for complainant to my statement in substance that actual examination proved that the impression as to the use of the Chicago-Desplaines route was baseless, I can particularize what books of Schoolcraft, and those others I referred to.

3864 In that connection I had in mind Schoolcraft's Travels in the year 1821. Collins & Hanney Edition, 1825, An Account of the Journey from Peoria to Chicago, page 318, beginning, "From this place, we went on about six miles, and encamped on a high prairie bank, where we spread our
3865 beds upon the right grass," and continuing to the break headed, "Rock Fort," on page 319, and beginning on page 321, with the words, "Finding the navigation so difficult, we determined to relinquish the design of proceeding any farther by water," and continuing to the end of the account of the journey, "on to Chicago by horses."

A reference to Tousey appearing in the volume of Personal Memoirs and so forth, Schoolcraft, 1851, pages 179 and 180, and a reference to Kennedy in Hutchins' Topographical Description, 1778, page 51, through the whole of Kennedy's Journal, to page 64.

My attention is directed to Hoffman's Winter in the
3866 west, referred to in complainant's testimony, transcript 332 to 335 (Abst., 155-157), particularly the portion beginning:

"There is one improvement to be made" and ending "Over the intervening prairie at high water."

Hoffman being an intelligent traveler, what he says merits consideration. He was at Chicago in January, 1833, or 1834, the weather being extremely cold.

Hoffman, page 242, letter 18, dated Chicago, January
3867 10, 1834 (reading):

"I have been here more than ten days, without fulfilling the promise given in my last. It has been so cold, indeed, as to almost render writing impracticable in a place so comfortless. The houses were built with

such rapidity, during the summer, as to be mere shells; and the thermometer having ranged as low as 28 below zero, during several days, it has been almost impossible, notwithstanding the large fires kept up by an attentive landlord, to prevent the ink from freezing while using it, and ones fingers become so numb in a very few moments when thus exercised, that after vainly trying to write in gloves, I have thrown by my pen, and joined the group, composed of all the household, around the barroom fire.

* * * Several persons have been severely frostbitten in passing from door to door; and not to mention the quantity of poultry and pigs that have been frozen, an ox, I am told, has perished from cold in the streets at noonday."

3868 There is no evidence in this narrative to show that he did see the Desplaines route, at any rate, since the weather was so cold, the passage could have no bearing upon the question upon the navigability of the Desplaines.

Motion to strike out.

The WITNESS (continuing): Note M, in the appendix, deals with the Chicago river and the question that the canal could connect the Chicago with the Desplaines, and from the nature of this note it is clear that he has drawn it from Keating's account of Long's expedition of 1823.

I say it is clear because the narrative of the expedition of Major Long by Keating, Vol. I of 1824 edition, pages 165 to 167, contain the substance of note M of Hoffman. Part of said note is direct quotation from these pages of Keating; the remainder, it seems evident, a condensation of the other portions. To make this plain the passages may be put in parallel columns:

The foregoing passages are as follows:

(Hoffman)

"The Chicago river, which is about two hundred and fifty feet wide, has sufficient depth of water for lake
3873 vessels to where it forks in the center of the town.

The southern and principal branch takes a rise about six miles from the swamp, which communicates also with the

(Keating)

"The south fork of the Chicago river takes its rise, about six miles from the forks, in a swamp which communicates also with the Desplaines one of the head branches of the Illinois. Having been informed that this route was frequently travelled by traders and that it had been used by one of the

Desplaines, one of the head branches of the Illinois. This swamp, which is designated by the Canadian voyageurs as Le Petit Lak is navigable at certain seasons of the year; it has been frequently traveled by traders in their pirogues; and a batteau from St. Louis, loaded with provisions, for the garrison at Chicago, has through this medium passed from the Mississippi into Lake Michigan.

Major Long observes, upon passing through this marsh in a canoe, 'we were delighted at beholding for the first time a feature so interesting in itself, but which we had afterward an opportunity of observing frequently on the route; viz: the division of waters starting from the same source and running in two different directions, so as to become the feeders of streams that discharged themselves into the ocean at immense distances apart. * * *

When we consider the facts above stated, we are irresistably lead to the conclusion, that an elevation of the lakes a few feet (not exceeding ten or twelve) above their 3874 present level would cause them to discharge their waters, partly, at least, into the Gulf of Mexico. That such a discharge has at one time existed, every one conversant with the nature of the country must admit; and it is equally apparent that an

officers of the garrison, who returned with provisions from St. Louis, a few days before our arrival at the fort, we determined to ascend the Chicago river in order to observe this interesting division of waters. We accordingly left the fort on the 7th of June, in a boat, which, after having ascended the river, about four miles, we exchanged for a narrow pirogue that drew less water; the stream we were ascending was very narrow and crooked, presenting a great fall; it continued so for about three miles, when we reached a sort of swamp designated by the Canadian voyagers under the name of Le Petit Lac. Our course through this swamp, which extended for three miles, was very much impeded by the high grass, weeds and so forth, through which our pirogue passed with difficulty. Observing that our progress through the fen was very slow, and the day being considerably advanced, we landed on the north bank, and continued our course along the edge of the swamp for about three miles, until we reached the place where the old portage road meets the current, which was here very distinct towards the south.

When we consider the facts above stated, we are irresistibly led to the conclusion, that an elevation of the lakes of a few feet (not exceeding ten or

expenditure trifling in comparison to the importance of the object would again render Lake Michigan a tributary of the Mexican Gulf."

twelve), above their present level, would cause them to discharge their waters, partly at least, into the Gulf of Mexico; that such a discharge has at one time existed, every one conversant with the nature of the country must admit; and it is equally apparent that an expenditure, trifling in comparison to the importance of the object, would again render Lake Michigan a tributary of the Mexican Gulf."

3875 I would say that Hoffman's statement would have the same force as in the original volume of Keating and no more. Hoffman's statement, page 224, where he says that the headwaters of the Illinois rise within eleven miles of the Chicago river, is not accurate, assuming that he meant the Desplaines. Speaking from my general knowledge, the Desplaines rises in Southern Wisconsin and the north branch of the Chicago river rises 25 or 30 miles from its mouth. I believe the statement would be inaccurate on that account.

3876 Hoffman's statement "the distance to be overcome is something like ninety miles; and when you remember that the headwaters of the Illinois rise within eleven miles of the Chicago river," with a footnote reference to note M which has been read into the record is based on Keating's account of Long's expedition.

My attention is called to Keating's expedition to the source at the St. Peter's (transcript, pages 295-297; Abst., 135-136), which ends with the words: "As the portage then extends to Mount Joliet near the confluence of the Kankakee."

3877 The excerpt read by Alvord ends on page 168 of the 1825 edition. I read the last of the paragraph, page 168 (reading):

"When we consider the facts above stated, we are
3878 irresistibly led to the conclusion, that an elevation of the lakes of a few feet (not exceeding ten or twelve) above their present level, would cause them to discharge their waters, partly at least, into the Gulf of Mexico; that such a discharge has at one time existed, every one conversant with the nature of the country must admit; and it is equally apparent that an expenditure, trifling

in comparison to the importance of the object, would again render Lake Michigan a tributary of the Mexican Gulf. Impressed with the importance of this object, the Legislature of Illinois has already caused some observations to be made upon the possibility of establishing this communication; the Commissioners appointed to that effect, visited Chicago after we left it, and we know not what results they obtained, as their report has not reached us; but we have been informed that they had considered the elevation of the petit lac above Chicago to be somewhat greater than we had estimated it. It is the opinion of those best acquainted with the nature of the country, that the easiest communication would be between the Little Calamick and some point of the Desplaines, probably below the portage road; between these two points there is, in wet season, we understand, a water communication of ten or twelve miles. Of the practicability of the work, and of the sufficiency of a supply of water, no doubt can exist. The only difficulty will, we apprehend, be in keeping the communication open after it is once made, as the soil is swampy, and probably will require particular care to oppose the return of the soft mud into the excavation."

3879 Q. With the excerpt in mind which was read by Professor Alvord, and this additional portion of it, will you give your conclusions as a historian as to the weight to be attached to these statements of Keating?

Objection; no proper foundation laid for such question.

A. The character of this book and auspices under which it appeared gave rise to a presumption in favor of its general reliability, which may be overthrown if facts are cited which tend to overthrow it. He states that they passed, though with difficulty,—I do not quote literally,—into Mud Lake, through which their progress was so slow that they abandoned the boat, a light pirogue, and walked three miles to the point where the portage road met the current flowing toward the Desplaines.

3880 They did not doubt the route across from Chicago to the Desplaines was very eligible in the spring. Hopson told them he had traveled it with ease with a boat loaded with flour and lead. The portage road is eleven miles long. The usual portage is four to nine miles. That in dry seasons it has been said to amount to thirty.

Keating concludes that an expenditure, "trifling in comparison with the importance of its object," would cause the lakes to empty into the Gulf. Those most familiar with the nature of the country think the easiest communication would be between the Little Calimick, and some point on the Desplaines.

Keating did not go further than to the Desplaines, and so far as the book shows, had no direct knowledge of that stream. As to the feasibility of the canal communication with the Mississippi, he accepts the reports of others.

Hopson's statement applies to the route from the Desplaines to the Chicago. Obviously, it could be traveled with ease in a loaded boat in time of high flood.

3881 The basis of my last observation being that Hubbard states in the Hamilton Hubbard, that Mud Lake will not float a boat except in times of very high water, and Keating says in another part of this narrative that although they were here in early June, Keating says the Desplaines is so deep that they had difficulty in fording it at a point higher up.

Objection; to the witness telling what people say in these passages.

The WITNESS (continuing): I read from chapter 5, Keating 1825 Edition, page 175 (reading):

"Having spent a few days in Chicago, the party left that post on Wednesday, June 11th." * * *

Page 176 (reading):

3882 "The first stream passed, on that day, was the Chicago river, which we crossed about half a mile above the fort, and immediately above the first fork (or Gary river); the party next came to the River Desplaines, which is one of the head branches of the Illinois; it receives its name from a variety of maple, which by the Canadians is named Plaine. In Potawatomi the river is termed Sheshikmaoshike Sepe (Which signifies flumen arboris quae mingit). This appellation is derived from the great quantity of sap which flows from this tree in the spring. We crossed the Desplaines about four miles above the Portage road; it was forty yards wide, and so deep that part of our baggage was wet while fording it, but fortunately none materially injured. The length of the Desplaines from this ford to its source is about fifteen miles, that to its confluence with the Kankakee about forty miles."

3883 When I cited Hubbard, as authority for the statement that Mud Lake will not float a boat except in times of very

high water. I had in mind the passage in Hamilton's Hubbard, page 39, which says:

"Mud Lake drained partly into the Aux Plaines and partly through a narrow, crooked channel into the south branch, and only in very wet seasons was there sufficient water to float an empty boat."

- 3884 Proceeding with my general analysis of Keating and the weight to be given to it, Keating apparently accepted, without question, the general but ignorant supposition that only a small sum would be wanting to open communication between the lakes and the Mississippi.

I fix the word "ignorant" on Thomas Tousey's letter to Schoolcraft wherein he gave an account of his own examination of the route in 1823.

The passage beginning on page 179 of Schoolcraft's Thirty Years with the Indian Tribes (reading):

- "The reading of books and looking at maps make a fugitive impression on the mind, compared to the ocular view and examination of a country, which make it seem as though we cannot obtain valuable information, or money to serve a valuable purpose, without great personal labor, fatigue, and often danger. This was much verified to my satisfaction, from a view of the Great Western lakes; the interesting position where you are—
- 3885 Mackinaw, Green Bay, the fine country between Green Bay and Chicago, Chicago itself, and the whole country between the later place and St. Louis.

Without seeing that country, supposed by many to be the region of cold and sterility, I could not have believed there was in it such a store of blessings yet to be drawn forth by the labor and enterprise of men, for succeeding generations." * * * "I regard Green Bay, at the mouth of Fox River, and Chicago, as two very important positions, particularly the latter. For many years I have felt a most anxious desire to see the country between Chicago and the Illinois (river), where it has generally been, ignorantly, supposed that only a small sum would be wanting to open a communication between them. By traveling on horseback through the country, and down the Illinois, I have conceived a different and more exalted opinion of this communication, and of the country, than I had before, while I am convinced that it will be attended with a much greater expense to open it than I had supposed."

3886 When Schoolcraft came to examine the Desplaines, he too was convinced of the fallacy of this information and agreed with Tousey concerning it. In that connection I read from Schoolcraft's *Travels in Central Portion of the Mississippi Valley*, page 332, the volume heretofore referred to, dealing with the trip to Chicago on horseback. (Reading) (under date of August 14, 1821):

“About ten o'clock in the morning we reached the ford of the Desplaines. We found the river about thirty yards wide and the depth of water two feet. Between this place and the Vermilion, where we left the Illinois, we have seen the river but seldom, although our route has been for the greater part upon its banks. We have, however, seen its channel at a sufficient number of points, to determine that it has several long and formidable rapids, which completely intercept the navigation at this sultry season—a remark that has been confirmed by meeting several traders on the plains, who had transported their goods and boats in carts from Chicago creek, and who informed us, that they thought it practicable to enter the Illinois at Mount Joliet. This would
3887 lengthen the portage to about thirty miles, but it has been perceived that we ourselves began it, far below this last mentioned point. This fact is sufficient to show the error of those who have supposed, that a canal of only eight or ten miles would be necessary, to perfect the navigation between Lake Michigan and the Illinois. A canal of this length would indeed perfect the communication, which already exists at certain seasons, between Chicago creek and the Desplaines, but must fall far short of the grand purpose.

But although our journey has produced a conviction, that the difficulty and expense which will attend this work are greatly underrated; it has also impressed us with a more exalted opinion of this projected communication, and the ability of the country through which it must pass, eventually to complete and maintain it. If the present scanty population and feeble means of this part of Illinois, has convinced us that the commencement and completion of this important work, are more remote than we before supposed, its final execution is not the less certain, and we regard the plan as one entitled to every rational and proper aid.”

3888 I observe the statement in Keating that "The length of the Desplaines from its source is about fifteen miles." Stating from memory I should say the passage is inaccurate; the Desplaines rises a greater distance than that from the portage.

Another fact weakening the authority of Keating is 3889 that on pages 164 and 165 of the 1825 edition, there is what I think may be fairly described as a bitter attack upon Schoolcraft's Description of the Country around and near Chicago. Schoolcraft is generally considered an excellent authority. On the whole his account harmonizes with the known facts at the present time, while Keating is largely discredited by these facts.

Motion to strike out the word "bitter," and conclusions with reference to known facts.

3890 The WITNESS (continuing): My attention is called to the reference to Keating, transcript 2855 (Abst., 1161), page 164, beginning, "We were much disappointed at the appearance of Chicago and its vicinity. We found in it nothing to justify the great eulogium lavished upon this place by a late traveler, who observes that 'it is the most fertile and beautiful that can be imagined,'" and ending "consists merely of a plain, in which but few patches of thin and scrubby wood are observed scattered here and there."

My attention is also called to the extract from Schoolcraft's Journal on transcript p. 2858 (Abst., 1162) being from page 384 of Schoolcraft's narrative, beginning with the words "The country around Chicago is the most fertile and beautiful that can be imagined."

3891 Having those statements before me, and being asked on what I base my statement as to Schoolcraft's statement harmonizing with the known facts, I read a portion of Keating's account of Chicago and vicinity, page 164 (reading):

"The best comment upon this description of the climate and soil is the fact that, with the most active vigilance on the part of the officers, it was impossible for the garrison, consisting of from seventy to ninety men, to subsist upon the grain raised in the country, although much of their time was devoted to agricultural pursuits. The difficulties which the agriculturist meets with here are numerous; they arise from the shallowness of the soil, from its humidity, and from its ex-

3892 posure to the cold and damp winds which blow from the lake with great force during most part of the year. The grain is frequently destroyed by swarms of insects. There are also a number of destructive birds of which it was impossible for the garrison to avoid the baneful influence, except by keeping, as was practiced at Fort Dearborn, a party of soldiers constantly engaged in shooting at the crows and blackbirds that committed depredations upon the corn planted by them. But, even with all these exertions the maize seldom has time to ripen, owing to the shortness and coldness of the season."

Some of those statements are possibly true. I do not argue that everything Keating said on this subject is incorrect or contradicted by facts at the present or authorities in this particular period. Some of those statements are contradicted by other available sources of information.

The Caxton Club edition of Wau-bun, Chapter 17, Chicago in 1831, page 140, reads:

"Beyond the parade grounds, which extended south of the pickets, were the company gardens, well filled with currant bushes and young fruit trees."

3893 (Reading) page 141:

"On the northern bank of the river, directly facing the fort, was the family mansion of my husband. It was a long, low building, with a piazza extending along its front, a range of four or five rooms. A broad green space was enclosed between it and the river, and shaded by a row of Lombardy poplars. Two immense cottonwood trees stood in the rear of the building, one of which still remains as an ancient landmark. A fine, well cultivated garden extended to the north of the dwelling, and surrounding it were various buildings appertaining to the establishment,—dairy, bake houses, lodging house for the Frenchmen and stables."

(Reading):

"In 1816, Mr. Kinzie and his family again returned to Chicago. The fort was rebuilt on a somewhat larger scale than the former one."

I will note that the ensuing passages deal with events following 1816. For example, Wolcott came here in 1820 and was Indian agent until 1830; troops were removed from the garrison in 1823, and so forth.

(Reading, Chapter 20 of Wau-Bun, page 197):

3895 "The few citizens of Chicago in these days, lived for the most part a very quiet unvaried life. The great abundance of game, and the immense fertility of the lands they cultivated, furnished them with a superabundance of all the luxuries of farm, cornfield and dairy. The question was once asked by a friend in the 'east countrie:'

'How do you dispose of all the good things you raise? You have no market?' 'No.' 'And yet cannot consume it all yourselves?' 'No.' 'What then do you do with it?' 'Why we manage, when a vessel arrives to persuade the captain to accept a few kegs of butter, and stores of corn and vegetables, as a present, and that helps us to get rid of some of it.' "

I now refer to a manuscript, best described as the Mosses Morgan Narrative of the rebuilding of Fort Dearborn in 1816. It is in the handwriting of William R. Head, of Chicago, who has written it down and through whose agency it has come to us. It is signed by him. This manuscript was given by him to Professor Charles
3896 Mann of the Lewis Institute. I am recounting the history of the manuscript as Professor Mann gave it to me.

Objection.

The WITNESS (continuing). Professor Mann was preparing a lecture on the subject of Fort Dearborn, which was delivered before the Chicago Historical Society, and Head, long a citizen of Chicago and Illinois and a prominent official of the Illinois Central Railroad, whose family live on the south side, loaned this particular manuscript to Mann to use in the preparation of his lecture. Head died and Mann deposited it with the Historical Society and it came into my hands. I talked with Head's daughter with reference to these manuscripts. I read from the manuscript (reading):

3897 "During the temporary residence of the writer in Carlville in the years 1857-1858, he had a cottage built for his family to occupy. It was upon property in Edward's Addition situated east of the cemetery and for many years thereafter occupied by Dr. Glass. Among the carpenters who worked on the building was an old man named Moses Morgan whose home was situated in the same portion of the town, causing us to become

neighbors. The females of our family soon became intimately acquainted although they had known each other several years before, or at about the time the railroad was built from Alton to Springfield (1851). A close and very intimate acquaintance and friendship soon take place between the writer hereof and Brother Moses Morgan, who was one of the venerable Peter Cartwright school of Methodists of days of old. Beside delighting in hearing religious newspapers read to him, Mr. Morgan had quite a taste for histories and the earlier military items, occasionally printed in the *Western Watchman*."

That shows the relation between Head and Morgan. The manuscript goes on to state that Wau-bun was once being read in Morgan's hearing, when he stopped the reading with an exclamation. He had been a Sunday school pupil of Mrs. Kinzie's, and helped build the second Fort Dearborn in 1816. His comments upon the story and accounts of his experience follow. I came then to the portion which I wish to read into the record as bearing upon the dispute between Keating and Schoolcraft. The account preceding this particular citation relates to the sending of the expedition here in 1816 for the construction of the second Fort Dearborn. (Reading page 4-a):

"Our troops soon occupied an old pasture near the fort grounds and engaged two half breeds and their squaws, with ponies, and our plows to harrow a little farm, with the aid of our thirty shovels to get vegetables planted for winter use. The two half-breeds were Robinson and Wilmette (mentioned in Wau-bun). These two Indians, it appeared, were well known in Detroit as being trustworthy if they were sent out as messengers to distant points. A lonely half breed elderly Frenchwoman always worked or traveled with Robinson. She was not old enough to be his mother, she was not his wife, neither was she his sister. It was strange to us that she neither smiled nor thanked the men for their overplus or wasting rations, but she always required Robinson to partake of it before she would touch it." * * * "The gardening undertaking did not prove a success at first. The men found it was commenced too late in the summer (July). The Canadian gardeners who had come from Detroit and planted

in May, brought in vegetables grown four miles up the South creek, and sold them to the officers' mess at high prices. The seeds brought from the east for the use of the garrison were probably old and were very scrupulously dealt out by the quartermaster because a like quantity would be needed for next spring before another vessel would arrive."

3900 Just before this paragraph the manuscript says:

"Our troops soon occupied an old pasture near the fort grounds."

(Reading, p. 4-a):

"One of the Indian trader's business concerns in Detroit, foreseeing the possibilities of a new locality, had already sent some Canadian French farmers or gardeners to find the best ground for framing and starting truck patches for vegetables which would soon be necessary in camp of more than a hundred men, including the workmen."

It is to these Canadian French farmers that I have reference as being located four miles up the South creek, who brought vegetables and sold them to the officers mess.

3902 A further reference throwing light on Keating's accuracy is Jacob Varnum's Journal, the year apparently being 1817, page 51, heretofore identified and used by me. (Reading):

3903 "In July I accompanied Sister Ann back again to Mackinac, and returned August 4th. From this time onward for two years, nothing especially worthy of record occurred. My time was generally taken up, first in superintending the erection of a house for a factory in 1817, attending to my traffic with the Indians, and to my domestic affairs, farming, gardening, etc., and frequently in hunting."

I call attention to a manuscript entitled "Chicago from 1803 to 1812, by General James Grant Wilson, mainly drawn from verbal account of Dr. John Cooper, Surgeon of Fort Dearborn," which was presented to the Chicago Historical Society by Dr. O. L. Schmidt, July 12, 1907, identified by reading from the manuscript, beginning (reading):

"In early life, the writer was well acquainted with a venerable man who spent several years at Fort Dearborn during the first decade of the nineteenth century, having been appointed surgeon of that frontier post by

3904 his friend General Henry Dearborn, then Secretary of War, in Thomas Jefferson's second administration. With him I had many conversations concerning the early days of Chicago and the northwest. Later when I contemplated preparing a history of the western metropolis, I naturally listened with increased interest to the reminiscences of almost the only survivor among those whose memories extended back to Chicago's earliest decade. Various circumstances conflicting with the carrying out of the historical project after the civil war, chief among which was the writer's return to the City of New York, where he has ever since resided. Most fortunately some memoranda of my medical friend's later conversations were preserved, and chiefly from those notes, the following pages have been prepared more than two score years after the venerable physician and pioneer passed away at Poughkeepsie on the Hudson, his home for half a century.

Dr. John Cooper's grandfather, who was an Englishman, accompanied the British Army to Quebec, where he fought under General Wolfe, and was near the hero when he fell in the hour of victory. He did not return to his native land, but left the service and settled as a farmer in Ulster County, on the banks of the Hudson. The grandson was born at Fishkill, in the adjoining County of Dutchess, June 6th, 1786, studied medicine, and entered the United States Army as a surgeon June 3905 13, 1808, almost immediately receiving orders to proceed to Fort Dearborn. From Washington he went by way of New York and Albany early in July to Buffalo, where he boarded the United States Brig, 'Adams,' commanded by Commodore Henry Brevort. The voyage across Lake Erie occupied a week, another week was spent in passing through the river and Lake St. Clair, including two days delay at Detroit, and arriving at the Island at Mackinac. The brig remained there several days, and then proceeded, via Green Bay to Chicago, which voyage occupied an additional three days, the time spent by Cooper in reaching his destination from Washington, being a greater number of days, than would require hours at the present period."

I am not certain that James Grant Wilson is not still living. He was a resident of Chicago for a time pre-

ceding the civil war, when pursuant to a plan to write a history of Chicago he collected various manuscripts and documents, among others the transcript of the names in the account books of John Kinzie. Wilson went to war, rose to the rank of General and never returned to Chicago, but resided in New York until recently. Upon the Centennial of the founding of Fort Dearborn he returned some of these manuscripts, among them the letter which I am reading. He has been for many years prominent in the literary and social life of New York; he contributed articles to the American Historical Review and has been president of the Author's Club. (Reading from manuscript):

3907 "The garrison of Fort Dearborn then consisted of ninety-six men of the First United States Infantry, commanded by Captain John Whistler, with Lieutenant Joseph Hamilton of Maryland and Robert Thompson of New York, who died during Surgeon Cooper's term of service at the post. The fort consisted of four log houses used as barracks, and two block houses, one containing two guns, the other one cannon, with several hundred stands of small arms, the whole surrounded by a palisade some twelve feet high, surmounted by Crow's feet of iron. The officer's gardens, in which large quantities of melons and other small fruit and vegetables were raised, extended south from the fort. At a short distance to the southwest, were two log houses, one occupied by Mathew Irwin, the United States factor or contractor, and the other by the Indian Agent, Charles Jewitt. A mile or more to the southwest was the home of a small farmer, who supplied the officers with butter and eggs. At the fork of the Chicago river, there was a house belonging to a man named Clark, who was a cattle dealer, and was occasionally employed about the fort. On the north side of the river there were four log houses. One nearly opposite to the post was the home and shop of John Kinzie, the Indian trader, who came from Canada."

This manuscript was the property of the Chicago Historical Society.

3908 I now call attention to manuscripts owned by the Chicago Historical Society, known as the Kingsbury papers, or letterbooks of Col. Jacob Kingsbury, an officer of the U. S. Army, in command of various posts here in

the northwest approximately during the period of the existence of the first Fort Dearborn. Among others he was at Michillimackinac and Detroit, and a considerable portion of the time a superior officer in charge of a group of forts, which included Fort Dearborn, Fort Wayne, Mackinac and Fort Detroit, including authority over what Kingsbury styles in the manuscript the navy of the lakes, consisting of one brig, I believe, the Adams, just referred to in the Cooper-Wilson letter. The letterbook does not comprise the original letters, but is like those men of that period were in the habit of keeping. For instance, Polk kept a letterbook, and in his diary he frequently says "see my letterbook," as authority for following out this reference and giving further information on it. It contains copies of original letters which would be used by historians as though they were originals.

3909 They are in handwriting. Do not know whether they are in Col. Kingsbury's handwriting; they are not all in the same handwriting.

I was just going to say with reference to the illustration I used: President Polk's letterbook was kept by his private secretary, J. Knox Walker, and so most of the letters so far as they have been preserved, would be in Walker's handwriting, and in the Polk paper's which are now in the Library of Congress, some of the papers appear there in Polk's own hand and some in the hand of his secretary. Some of the latter are annotated or labeled by President Polk showing evidently that he looked upon them as being in every respect the same as the original letters.

These particular manuscripts were purchased some years ago by the Chicago Historical Society. I have not the 3910 exact details as to whom they were obtained from or under what circumstances. It was considered that the Society gained a distinct prize in the possession of these papers. If it is not presumptuous from my use of these letters, aside from what Professor Mann has done, would say, historians regard these as the original letterbooks of Colonel Kingsbury. They have been reserved for my use by the Society.

Motion to strike out the remarks as to what the Society considers.

3911 The WITNESS (continuing). On the outer cover is Letter Book Number 4, Colonel Jacob Kingsbury's letterbooks commencing 22nd May, 1810," evidently written at

the time from the appearance of the writing. On the other side is a title in ink, as follows: "Copies of letters received by Colonel Kingsbury since the 20th May, 1810." Its appearance would lead one to decide that it is contemporaneous with the writing in the letterbook.

Objection; incompetent, irrelevant and immaterial.

The WITNESS (continuing). I call attention to letter No. 11.

3912 "Fort Dearborn, 31 May, 1810.

Sir:

I arrived here on the 23d inst. and have taken command of the post by order of the Honbl. Secretary of War. To do justice to Captain Whistler I cannot but observe that I think he has paid particular attention to every Part of his duty since he has commanded this Post. I found the garrison clean and in good order, the company performs their exercise well, their clothing, Arms &c., in Good Order. It is probable you have been informed that he has been in the habit of raising large Quantities of Corn; he has now not more than two and an half acres planted and I am informed that he has never planted more than Quantity in a year since he has been here. Herewith enclosed is a monthly of the Garrison & an Inspection Return of the Company for May, 1810.

I am, sir,

Very respectfully,

Your most Obedt. Servt.

(Signed) N. HEALD,
Capt.

Col. Jacob Kingsbury,
Commandant,
Detroit."

3913 From the opposite side containing copies of letters written by Col. Kingsbury, I read letter No. 15 (reading):

"Fort Detroit, Michigan Terrty.
11 June, 1810.

Dear Sir:

I received yours of the 31st ult. with a Monthly and Inspection Return by Capt. Whistler. I was happy to hear that you found the Garrison clean and in good order. With respects to Capt. Whistler's raising large

quantities of Corn, I have been induced to believe for some time past, that his enemies have reported his having ten acres of Corn when he had but two or three. Herewith is enclosed a copy of a general order respecting the Issues of Fresh meat to the troops."

Captain Whistler was the first commander of Fort Dearborn, coming here in 1803 and building the fort, and remained in command until the time approximately indicated by these letters, being succeeded by Captain Heald, who arrived in

3914 April, 1810. He was removed because a quarrel developed between the officers of the garrison. Whistler's enemies made the charge against him referred to in these letters, that he was raising a large quantity of corn here each year, ten or twelve acres. Heald came and found that he had not over two and a half acres and was led to believe that he had never put in more than that amount. Evidently it was possible to raise corn at Fort Dearborn from 1803 to 1812, or else the charge of his enemies would have been unreasonable and therefore not made and the statements as to a smaller quantity impossible.

Motion to strike out.

Q. State if you know, what was the objection to his raising ten acres of corn?

Objection; he must give sources of his information.

A. The sources concerning life at Fort Dearborn at this time are few, hence the value which attaches to the Kingsbury manuscript.

3915 Speaking from my general knowledge of the situation at Fort Dearborn in this period, I understand that Whistler's enemies charged that he was using his position as commander at Fort Dearborn to raise a considerable quantity of corn each year to his own private profit.

3916 Motion to strike out; source of information should be produced.

Q. What do you infer was the impropriety of raising corn for himself, and in what did it consist?

Objection; not a matter for testimony of a historical expert.

A. My conclusion, formed at a time when I had no connection with this case, was that it was an improper if not dishonest operation, to take advantage of his official position to raise a crop of corn which he considered and used as his own private property.

Q. Is there anything to indicate through whose labors the corn was raised?

Objection; passages speak for themselves.

The WITNESS. I have no reference in mind which would indicate.

3917 Commanders of posts, as Whistler was were not in the habit of engaging in manual labor, such as raising corn. Therefore, I infer that the soldiers of the Garrison were employed in that labor. Keating seems to have something of this sort in mind when he says the soldiers were not able to raise enough to supply themselves with provisions.

3918 Further on the question of Keating's authority I have here a volume entitled "Senate Documents, 1st Session 24th Congress," 1835 to 1836. In this volume, document No. 333, is entitled: "Report of a Geological Reconnoissance made in 1835, From the Seat of the Government, By the Way of Green Bay and the Wisconsin Territory, To the Coteau De Prairie, An Elevated Ridge Dividing The Missouri From The St. Peter's River. By G. W. Featherstonehaugh, U. S. Geologist." This document has been identified.

Featherstonehaugh was an Englishman; Geologist by profession. He came to the United States with the idea of putting the science of geology upon a foundation here; he established a geological journal which he edited for some years; was engaged on two different occasions to make geological reconnoissances for the U. S. Government. This document is an official report of one of them. In addition he was employed as an expert to pass on certain phases of the dispute between the United States and Great Britain over the boundary line between Maine and New Brunswick, finally settled by the Webster-Ashburton treaty 1842. He returned to England and in 1847 he published a volume entitled "A Canoe Voyage up the Minnay Sotor," with an account of the lead and copper deposits of Wisconsin, etc., by G. W. Featherstonehaugh, in two Volumes—Volume 1, Richard Bentley, London, 1847.

3920 These two volumes in a general way restate the results of Featherstonehaugh's observation on his various expeditions, reported to the U. S. Government.

Taking up the Senate document; Featherstonehaugh went by way of the Great Lakes, stopping at Mackinac and the Fox-Wisconsin route to the Mississippi, then up the Mississippi to Fort Snelling, and thereafter to the sources of the

St. Peters river. He followed approximately the route taken by Long's expedition in 1823, so far as that followed the Mississippi and St. Peters rivers.

3921 Featherstonehaugh then checked up Keating's account of Long's expedition and at various points made criticisms of more or less importance and seriousness, some of which I read. (Reading page 128):

“Beyond Ball-game river, on the left bank, is an important stream, named Black river, down which stream a great deal of fine pine timber is floated. The country all around here is remarkable for its fertility and beauty. The most conspicuous locality on this portion of the upper Mississippi, is a place called by the French *La Montague qui trempe a l'eau*, or the mountain which is steeped in the water. I ascended to the top of this peak, which has a steep ascend of about 500 feet; the crest at the top runs about north and south for 200 yards, and is not more than three or four yards
3922 wide, falling off in a precipice to the west, and having a sharp slope of rich soil to the east, well covered with trees and shrubs. From the top there is an extensive view of the course of the Mississippi and the country in the interior beyond its banks. The same constant character of the valley is observed here; a rich bottom, two or three miles wide, broken into islands and swamps and ponds, and the main channel of the river flowing down between *Trempe a l'eau* and the right bank, about 1,200 yards wide. This curious peak has been represented as ‘a rocky island, separated from the left bank of the river,’ and to be ‘very near the east bank of the river.’ ”

Here there is a footnote reference to which I turn and read:

“Keating's Narrative of an Expedition, &c., vol. 1, p. 271.”

Continuing then with the direct citation from Featherstonehaugh (reading):

“This error was no doubt occasioned by the writer's looking at it from the right bank and not stopping to examine it. It is, in fact, an isolated bluff, about a mile and a quarter in circumference, separated from the right bank, and not from the east, the intervening space being occupied by the present main channel.”

3923 (Reading, page 142):

"Having reached the Makato, it became my duty to enter it. Expectations had been raised by the publication of Major Long's expedition, respecting some supposed copper mines which M. LeSuer was said to have discovered about the beginning of the eighteenth century, not far from its mouth, and which Major Long, in passing up the St. Peter's, had not visited. The following passage, with others, in the publication in question, gave so much importance to the affair, that it was deemed proper to make an investigation of the locality part of my instructions."

Here I turn to footnote references to the foregoing paragraph, and read the first:

"Narrative of an expedition to the sources of St. Peter's river, &c.; 2 vols. 8 vo. By William H. Keating, Philadelphia, 1824."

And the second (reading):

"Vol. 1, p. 316."

3924 From what follows Featherstonehaugh comes to the conclusion that the copper mines did not in fact exist.

Objection; statement speaks for itself.

The WITNESS (continuing). In view of the objection I read page 142 (reading):

"Charlevoix states that LeSuer was sent by M. D'Iberville to make an establishment in the Sioux country, and to take possession of a copper mine LeSuer had there discovered. He ascended the St. Peter's 40 leagues, to la riviere Verte, which comes in on the left. Though only the last of September, the ice prevented him from ascending that river more than a league; he therefore built a fort, and spent the winter at that spot. In April, 1702, he went up the riviere Verte to the mine, which was only three-quarters of a league above his winter establishment. In twenty-two days they got out more than thirty thousand pounds of ore, of which four thousand pounds were selected and sent to France. The mine was at the foot of a mountain ten leagues long, that seemed to be composed of the same substance. After removing a black burnt crust as hard as rock, the copper could be scraped with a knife.' A manuscript in the possession of the American Philosophical Society, written by M. Benard de la Harpe,

3925 is also cited: 'It appears from this manuscript that Le Suer's discoveries of blue earth were made in 1695, but that all further operations were interrupted until 1700. We find in the same manuscript, under the date of the 10th of February, 1702, that Le Suer arrived at the mouth of the Mississippi that day with two thousand quintals of blue and green earth.' The same manuscript is also said, in giving the details of Le Suer's progress up the Mississippi, to state: 'Finally, on the 19th of September, he left the Mississippi, and entered the St. Peter's river, which comes in from the west bank. By the 1st of October he had ascended this river forty-four and a quarter leagues, when he entered the Blue river, the name of which is derived from the blue earth, found on its banks.' 'On the 26th M. Le-Suer went to the mine with three canoes, which he loaded with green and blue earth. It was taken from mountains near which are very abundant mines of copper, of which an assay was made in Paris by M. L'Huilier, in the year 1696.'

3926 I had, through my guide (Milor), neglected no opportunity to inquire amongst the Nacotahs respecting these mines, but I never could obtain any information, or even a traditional report, of anything like a copper mine in that region. Many of the chiefs concurred in saying that there were some bluffs a few miles beyond the mouth of the St. Peter's, to which the Indians had, at all times, resorted to procure a blue earth with which they were accustomed to paint themselves; and one old chief had described the locality with great precision. He was very well acquainted with the whole country between the St. Peter's and the Missouri, and had often crossed the Coteau de Prairie, but he had never heard of or seen anything like copper. This, however, was not particularly discouraging, as Le Suer's mineral was described as being a green and blue earth; and it might very well be an oxyde or carbonate in the carboniferous limestone, as it is found in the Wisconsin territory. I therefore entered the Mankato with some confidence. Its waters were extremely discolored, and I immediately saw they were the cause of the turbid state of those of the St. Peter's. When we had proceeded about a mile, we found a family of Nactotahs, of the Sissiton tribe,

encamped on a sandbar, taking care of some venison they had just killed. The locality I was in search of was well known to them, and they gave us very intelligible directions. The current was exceedingly strong, running about two miles an hour, and the stream appeared to furnish about one-half of the volume of the St. Peter's. About three miles from the entrance of the river there is a singular conical hill covered with grass on the right bank, which I thought a very probable situation for M. Le Suer's Fort L'Huillier, and I should have landed to examine it but for my anxiety to reach

3927 the blue earth locality, and on account of the weather, the snow falling as we passed it (September 22). Near six miles from the mouth, a fork of the river came in from the left bank, about forty-five yards wide, on the right bank of which is a ridge of from eighty to one hundred feet wide, very well wooded, and fronting a prairie on the opposite side. We found very little current, the main stream having forced it back for some distance. About two miles up this fork, we at length came to a bluff, about one hundred and fifty feet high, on the left bank, containing the blue-earth locality. On climbing it, I found the same horizontal sandstone and siliceous sandstone common to the whole country. Towards the top was a broad seam of bluish clay, intermixed in places with silicate of iron, being a continuation of the deposits I had seen before at Myakah, and valuable only for the savages to paint themselves with. From this bluff, I advanced in a westerly direction about two miles, over a part of the country grown up with small poplars, hazels, wild roses, and grass, in the hope of seeing the Coteau de Prairie, and making arrangements to proceed to it from this quarter; but I saw nothing of the kind from any eminence which I could gain; and having in my hand, and reading on the spot, what had been said of M. Le Sueur, his mountains, and his copper mines, I found myself obliged to come to the

3928 conclusion that these discoveries were fables invented to give him influence at the court of France. Before I left the northwest country, and after I had visited the Coteau de Prairie I found it was distant at least sixty miles from this spot, which leaves only the bluffs of the river to represent the mountains spoken of in the manuscript of La Harpe."

I call attention to this part of Featherstonehaugh's report to show that he was himself checking up Keating and saw reason to take issue with him on this particular point.

In another volume is a criticism of Featherstonehaugh on this particular point, it being stated that he missed the real point of issue, which was whether Le Sueur was ever on St. Peter's river. Do not express my approval or disapproval of this particular selection from Featherstonehaugh. The other reference is Elliott Coues' Expedition of Zebulon M. Pike. I now read from page 153 (reading):

3930 "In this part of the northwest territory it is very seldom that trees are found where there is no water. The first care of the traveler, in a region where there is nobody to assist him, is selfpreservation; his principal attention, therefore, is directed to trees, especially at the setting in of winter; without fuel he would be frozen to death in the night, and fortunately where there is fuel there is also water, unless it has been absorbed. The course of the small streams which form the principal sources of the St. Peter's, is along the wooded lines on the flanks of Chhray-tanka, or the Great Hills, the name given by the Nacotahs to the Coteau. This word is pronounced very guttural and rapid. Wherever those dark spots and lines were seen on its side, water was generally found. On these extensive plains objects are deceptive, from there being nothing to compare with them. An eminence at a distance will appear two hundred feet high, which, when reached, will not be fifty. A prairie-wolf looks, when running, like a deer; a small rock like a buffalo. I have seen an antelope rear up on its hind legs, as they always do to look at objects, and could have thought it a camelopard. At a distance of fifteen miles the Coteau looked like a lofty chain. Mr. Keating assigned to it a height of one thousand feet. The illusion was dispelled as soon as I came near it. The ascent is so gentle at the place where I began to ascend, that I was hardly aware I was going up hill. The ascent perhaps continues two and a half miles, and is not more than at the rate of one hundred and sixty feet to the mile. I do not suppose the Coteau to rise more than four hundred and fifty feet above the level of the upland prairie."

3931 I now call attention to the volume I have identified, entitled "A Canoe Voyage Up The Minnay Sotor, "By Featherstonehaugh, Vol. 1, page 289, the page heading being "Injustice Done to Carver." (Reading):

"The river now wound through a rich bottom, and was about one hundred yards wide. We passed a small prairie on the left bank, estimated to be twelve leagues from the fort, the edge of which is only twelve feet above the river. At nine we stopped to examine a stream on the left bank, with a strong current not more than twenty feet broad. Its waters were low, but, from the height of the banks, it was evident that the volume of water is large in the season of floods. Milor said the Indians called it Lododoah, or the 'Singing of War,' from the Nahcoteahs once assembling to sing the war song there? It is the same distance that Carver assigns to the river which he has given his own name to."

Here is a footnote which is as follows: "Carver's Travels, 1778, p. 74."

(Continuing reading):

"And I suppose it to be the same.

3932 In the narrative of Major Long's interesting expedition to Lake Winnipeg, &c., Carver is slightly spoken of, and I think great injustice done to him. It is true that, like many travellers, he has fallen into mistakes when venturing to give a detailed account of wild, unexplored countries, which had not fallen under his immediate notice; but he certainly visited the countries he has described, and must have been a person of great energy and courage, to attempt the journeys he performed at that particular period. I have great pleasure in saying, that, having followed him to the extent of his journey, with his book in my hand, I can express my confidence in him."

I now call attention to Schoolcraft's "Thirty Years with the Indian Tribes," pages 524-525, being the entry in Schoolcraft's Journal of November 2nd 1835, giving an account, with citations, of a letter received by him from Featherstonehaugh, containing statements bearing on Keating's account of the Mississippi and St. Peter's, wherein Featherstonehaugh says he found Keating's account surprisingly erroneous and takes occasion to approve of Carver's book which he says Keating was constantly denouncing.

Motion to strike out witness' paraphrasing of the work.

3933 The WITNESS (continuing) (reading):

"I found Mr. Keating's account of the Mississippi, and especially of the St. Peter's, most surprisingly erroneous, and old Jonathan Carver's book, which he is constantly denouncing, very accurate."

3934 I read from Featherstonehaugh's Canoe Voyage up the Minney Sotor, page 241. (Reading):

"I had read with some interest, in Carver's travels, an account"—and here there is a footnote, a citation from Carver which I shall not take the time to read unless called for—"of some curious remains of fortifications, which he had seen 'some miles below Lake Pepin,' but I had not been able to find anyone who could corroborate his account. We were now, by computation, very near the locality, and judging him to refer to the right bank of the river, although he does not say so, I frequently stopped, and either went or sent someone to take a look at the country from the top of the bank. L'Amirant having told me there was an extensive prairie not far from Roque's, on reaching it about noon I landed there, and ascending the bank, perceived, through some evergreen trees, unusual elevations about a mile and three-quarters off. Directing the boat to wait for me, I immediately walked across the prairie, a distance of about two miles, and on reaching them entertained no doubt that this was the remarkable locality seen by Carver. It certainly was a very curious place. The prairie was entirely level as far as these elevations, and the surface was completely composed of dusty sand, covering a black alluvial mould.

The first of these certainly had the appearance of an ancient military work in ruins; it had a steep sandy
3935 slope to the top, and resembled a very irregular work, entirely covered with drifted sand, consisting of something like three bastions and various salient angles. Inside of the work was a large cavity, and a slope of twenty yards to the bottom. There seemed also to be the remains of terraces. Outside was what might, perhaps, without exaggeration, be called a ditch, whether made by men or the wind, with a terrace of eight paces broad to the northeast. The inside of the cavity was about

seventy paces in diameter, and the whole elevation was 424 paces in circumference. Distant from this about 700 paces south-southeast was a second, resembling it in form and size, and about 700 paces east-southeast from this last was a third, the largest of the three, being 1,100 paces in circumference, having, like the others, what represented bastions and salient angles, and being capable of containing 1,000 people. Its walls appeared lofty when standing on the outside, and there was a deep ditch on the south side. Further to the south I counted six more. Nor was there wanting what an observer might fairly call a communication from one to the other and to the river, for the ground was thrown up all the way to it. From the highest point at which I stood I could distinguish a line of similar elevations extending at least four miles.

3936 At the northern end of this singular assemblage of elevations they most appeared to have been the work of art, whilst at the southern termination they gradually passed into an irregular surface, and became a confused intermixture of cavities and knolls, that I think might be satisfactorily accounted for by the blowing of sand. In this part, as Carver observes, were still a great number of straggling oaks.

It is possible that all this may have been done by the wind blowing a decomposed sandstone into these forms; but from the limited opportunity which I had of examining these appearances, I was far from being convinced of this. The substance of the prairie was a vegeto-alluvial deposit, having a light covering of sand upon it; and if it was the wind which had thus distributed the sand so evenly upon the surface, how are the raised lines which are continuous down to the river, and the elevations which so much resemble fortifications, to be accounted for? The same wind could hardly at one time lay the sand equally upon the prairie, and at another build up structures so much resembling works of art. Those, however, who think so after personal inspection, are bound to satisfy themselves why the wind has not produced similar effects upon the surface in other parts of this extensive prairie? It is difficult to suppose a force of that kind proceeding uniformly to produce effects that so extremely resemble a line of de-

3937 fense constructed by a barbarous people. But after all comes the question,—what were these fortifications intended to defend? Carver certainly talks somewhat extravagantly when he speaks of their being fashioned with the skill of a Vauban. I regretted not having leisure to dig about them; but the sand was so blown over the whole, that it would have required a great deal of time to clear only a very small space away. Hereafter, when this curious place becomes more known and investigated, if Indian antiquities should be discovered commensurate with the extent of the work, such as the stone instruments and weapons of offense usually found about Indian encampments, it would decide the question."

Footnote, quotation from "Travels through the Interior Parts of North America in the Years 1766, 1767, 1768. By J. Carver, Esq., pp. 57, 58. London, 1778." (Reading):

3938 "One day, having landed on the shore of the Mississippi, some miles below Lake Pepin, whilst my attendants were preparing my dinner, I walked out to take a view of the adjacent country. I had not proceeded far before I came to a fine, level, open plain, on which I perceived, at a little distance, a partial elevation, that had the appearance of an entrenchment. On a nearer inspection, I had greater reason to suppose that it had really been intended for this many centuries ago. Notwithstanding it was now covered with grass, I could plainly discern that it had once been a breastwork of about four feet in height, extending the best part of a mile, and sufficiently capacious to cover 5,000 men. Its form was somewhat circular, and its flanks reached to the river. Though much defaced by time, every angle was distinguishable, and appeared as regular, and fashioned with as much military skill, as if planned by Vauban himself. The ditch was not visible, but I thought, on examining more curiously, that I could perceive there certainly had been one. From its situation, also, I am convinced that it must have been designed for this purpose. It fronted the country, and the rear was covered by the river, nor was there any rising ground for a considerable way that commanded it—a few straggling oaks were alone to be seen near it. In many places small tracks were worn across it

by the feet of elks and deer; and from the depth of the bed of earth by which it was covered, I was able to draw certain conclusions of its great antiquity. I examined all the angles and every part with great attention, and have often blamed myself for not encamping on the spot, and drawing an exact plan of it. To show that this description is not the offspring of a diseased imagination, or the chimerical tale of a mistaken traveler, I find, on inquiry, since my return, that Mons. St. Pierre and several travelers have, at different times, taken notice of similar appearances, on which they have formed the same conjectures, but without examining them so minutely as I did. How a work of this kind
3939 could exist in a country that has hitherto (according to the generally received opinion) been the seat of war of untutored Indians alone, whose whole stock of military knowledge has only, till within two centuries, amounted to drawing the bow, and whose only breast-work even at present is the thicket, I know not. I have given as exact an account as possible of this singular appearance, and leave to future explorers of these distant regions to discover whether it is a production of nature or art."

Going back to my discussion of the validity of Keating's and Carver's accounts, I have here "The American Historical Review, Volume 11, Number 2, January 1906," J. Franklin Jameson, Editor, containing an article entitled "The
3940 Travels of Jonathan Carver," by Edward G. Bourne, page 287. Bourne subjects the book to such a critical examination as a skilled historian would give to a work he is undertaking to estimate. He concludes that parts of Carver's Travels are not authentic and that their standing among historians has been generally overrated. Bourne was regarded as one of the leading historical students of America at the time of his death, and had an especial reputation as a keen critic.

I go into his criticism of Carver to follow out to some of their conclusions the lines suggested by his study. On page 291 he points out (reading):

"The work proper consists of an 'Introduction,' 'A journal of the Travels' comprising 164 pages, and a treatise 'Of the Origin, Manners, Customs, Religion, and Language of the Indians' comprising 346 pages,

3941 with a short geographical appendix. It is this second and larger part, constituting a fairly complete natural history of the upper Mississippi valley, that has given Carter's *Travels* its position in the literature of primitive America."

This second and larger part is entitled "Of the origin, manners, customs, religion, and language of the Indians.

Reading further from Bourne:

"It is also this second part that invites a more detailed critical examination than it has yet received."

Bourne then points out the circumstances under which his attention was called to the possible lack of authenticity and validity of Carver's travels. I now read from page 292 (reading):

"A year or two later, in reading Greenhow's *History of Oregon*, I ran across a more detailed and explicit impeachment of Carver's *Travels*. Greenhow declared that the longer second part, on the Indians, animals, and plants, etc., is extracted almost entirely, and, in many parts, verbatim, from the French journals and histories. The book was written or rather made up, at London, at the suggestion of Dr. Lettson and other gentlemen, and printed for the purpose of relieving the wants of the author, who, however, died there, in misery, in 1780, at the age of 48."

3942 There is a footnote No. 2, "Robert Greenhow, *The History of Oregon and California, etc.* (Boston, 1844), 142, note."

Greenhow's criticism of Carver is devoted to the second part.

I read what Bourne has stated from Greenhow by way of criticism of Carver (reading p. 292):

"In proof that no injustice is here done to Carver's memory, read his magisterial and contemptuous remarks on the works of Hennepin, Lahontan, and Chalevoix, in the first chapter of his account of the origin, manners, etc., of the Indians; and then compare his chapters describing, as from personal observation, the ceremonies of marriage, burial, hunting, and others, of the natives of the upper Mississippi countries, with those of Lahontan, showing the conduct of the Iroquois, of Canada, on similar occasions, by which it will be seen that Carver has simply translated from Lahontan the whole of the accounts, even to the speeches of the chiefs.

3943 Carver's chapter on the origin of the Indians is merely an abridgement from Charlevoix's 'Dissertation' on the same subject. His descriptions of the language, manners, and customs, of the inhabitants of the Upper Mississippi regions, are entirely at variance with those of the same tribes at the present day, as clearly shown by the observations of Pike, Long, and other persons of unquestionable character, who have since visited that part of America. Keating, in his interesting narrative of Long's Expedition in 1823, expresses his belief that Carver ascended the Mississippi to the Falls of St. Anthony, that he saw the St. Peter, and that he may have entered it; but, had he resided five months in the country, and become acquainted with the language of the people, he would not have applied to them the name of Naudowessies, and omitted to call them the Dacota Indians, as they style themselves."

I now read from Bourne (reading):

"In regard to Keating's Narrative of Long's second expedition it may be added that in it the indebtedness of Carver's Travels to Lahonton was brought to public notice in 1824."

3944 Footnote 1 reads (reading):

"William H. Keating, Narrative of an Expedition to the Source of St. Peter's River, Lake Winnepeek, Lake of the Woods, etc., etc., * * * under the command of Stephen H. Long (Philadelphia, 2 vols., 1824, I. 323-324."

Continuing Bourne's study (reading):

"This is the earliest published impeachment of the originality of the Travels that I have met with. More specific were the charges noted by Henry R. Schoolcraft in his 'Journal' under the date of April 9, 1823, upon completing a careful perusal of Hennepin, La Honton, and Carver, undertaken when he expected to be selected to head the expedition to explore the St. Peter's River which was conducted by Long."

3945 I now turn to Schoolcraft's Thirty Years with the Indian Tribes, cited by Bourne, pages 168-169. Schoolcraft criticises Carver in certain respects. He states he thinks Carver made travels he claims to have made, that he afterwards came to want in England and fell into the hands of booksellers, who pieced out his books by plagiarizing from La Hontan, Charlevoix, and others, and in this way that portions

of Carver's work are not to be ascribed to him, and is not original.

Motion to strike out paraphrasing of Schoolcraft.

The WITNESS (continuing) (reading):

"Life has more than one point of resemblance to a panorama. When one object is past, another is brought to view. The same correspondent adds: 'Mr. Calhoun has come to the determination to authorize you to explore the River St. Peter's this season. I think you may safely make the necessary arrangements, as I feel confident the instructions will reach you soon after the opening of the navigation.'

3946 "In consequence of this intimation, I have been casting about to find some authors who treat of the region of country which embraces the St. Peter's, but with little success. Hennepin's Discovery of a large Country in the Northern America, extending about four thousand miles,' I have read with care. But care indeed it requires to separate truth from error, both in his description and opinions. He thinks 'Japan a part of the American continent'; and describes the Wisconsin as 'navigable for large vessels above one hundred leagues.' Yet, notwithstanding this gross hyperbole, he describes the portage between the Fox and Wisconsin at 'half a league,' which is within the actual distance. It may be admitted that he was within the Sioux country, and went up the Mississippi as high as the St. Francis.

La Honton, whose travels were published in London only a few years after the translation of Hennepin's, is entitled, it is believed, to no credit whatever, for all he relates of personal discoveries on the Mississippi. His fiction of observations on 'River La Long,' is quite preposterous. I once thought he had been as far as Prairie du Chien, but think it more probable he never went beyond Green Bay.

3947 Carver, who went from Boston to the Mississippi in the latter part of the 18th century, is not an author to glean much from. I, however, re-perused his volume carefully, and extracted notes. Some of the stories inserted in his work have thrown an air of discredit over it, and caused the whole work to be regarded in rather an apocryphal light. I think there is internal evidence enough in his narrative to prove that he visited the chief portions of country described. But he probably

neglected to keep diurnal notes. When in London, starvation stared him in the face. Those in office, to whom he represented his plans, probably listened to him a while and afterwards lost sight of, or neglected him.

3948 He naturally fell into the hands of the booksellers, who deemed him a good subject to get a book from. But his original journal did not probably afford matter enough, in point of bulk. In this exigency, the old French and English authors appears to have been drawn upon; and, probably their works contributed by far the larger part of the volume after the 114th page (Philadelphia ed. 1796), which concludes the 'Journal.' I think it questionable whether some literary hack was not employed, by the booksellers, to draw up the part of the work 'On the origin, manners, customs, religion, and language of the Indians.' Considerable portions of the matter are nearly verbatim in the language of Charlevoix, LaHontan, and other authors of previous date. The 'Vocabulary of Chippewa' so far as it is Chippewa at all, has the French or a mixed orthography, which it is not probable that an Englishman or an American would de novo, employ."

I now read from Bourne, page 294; the connection of this citation being that in the preceding pages he has referred to several criticisms of Carver, which have just been read into the record (reading, p. 294):

3949 "It is an interesting illustrating of the elusiveness of much important historical information that not one of these four destructive criticisms of Carver's Travels ever caught Professor Tyler's eye during his many years of reading in American literature, and that not one of them is referred to in any of the articles in the many works of reference that I have consulted on Carver. Yet it is obvious that, if Greenhow's assertions are sustained, Carver's Travels, whatever their literary charm, must cease to be considered an original work."

3950 In this paragraph the word "travels" as referring to Carver's book, is italicized, Bourne having in mind the title of the book rather than the actual act of Carver having made the travels as described in the first portion. The four criticisms just read seem to make this clear.

Motion to strike out interpolation as incompetent, immaterial and irrelevant.

The WITNESS (reading):

"That Carver's first chapter, on the 'Origin' of the Indians, is merely an abridgement of Charlevoix' 'Preliminary Discourse on the Origin of the Americans,' with some additions from James Adair's *The History of the American Indians*, will not be disputed by any one who compares them. As this chapter, however, is a summary of scholarly opinion, it might be urged that the most to be said is that if Carver wrote it he was too careless of the rights of literary property. But if Carver borrows his learning from Charlevoix, he was not less dependent upon him and upon La Hontan for his observations of Indian life, although he asserts with some parade." Here follows a quote from Carver.

(Reading, Bourne, p. 299):

3951 "The examples that have been given, a few out of many that might be cited, are sufficient to show that the allegations of Greenhow, and the conjectures of Wolcott and Schoolcraft were fully justified, and that the second part of Carver's *Travels* is essentially a compilation from La Hontan, Charlevoix, Adair, and other sources which I have not yet identified."

If is the second part of Carver's *Travels* which Bourne here condemns (reading, Bourne, p. 300):

3952 "Turning now to the first part or the narrative proper of Carver's *Travels*, is it a genuine record of experience and did he write it, or was it written by another from his memoranda or oral recollections? So far as I can judge by literary evidence, I should reply that Carver was the source rather than the author of the narrative. The style of the first part is fluent literary English, and apparently is from the same hand as the descriptive matter in the second part. To pronounce upon the worth of this part of the book first-hand intimate knowledge of the field of observation is required. This qualification William H. Keating, the scholarly and painstaking geologist and historian of Long's expedition to the source of St. Peter's River in 1823, possessed in a high degree. The members of Long's expedition naturally gave Carver's account a more critical scrutiny under more favorable conditions than has been the case since or is likely to be in the future. Their general judgment is unfavorable. In general it is remarked: 'No gentleman of the party would be willing to ascribe

to Carver a scrupulous adherence to truth, (personal observation having convinced them all of the many misrepresentations contained in his work.)' "

There is a footnote to the sentence reading, "The members of Long's expedition naturally gave Carver's account a more critical scrutiny under more favorable conditions," etc., which reads (reading):

"The late Dr. Elliott Coues in the notes to his *The Expeditions of Zebulon Montgomery Pike* (New York, 1895) repeatedly quotes Carver and expresses a favorable opinion of his narrative. He does not refer, however, to part II."

3953 Another footnote to the last sentence of the preceding excerpt (Bourne, p. 300), which reads: "Personal observation having convinced them all of the many misrepresentations contained in his work," the reference is as follows (reading):

"Keating, *Long's Expedition* (Philadelphia, 1824), 1, 277."

From this citation from Bourne's study, it appears that he expressly disqualifies himself as being able to pass critically upon the first part of Carver's *Travels*. Bourne fell into a serious error, for he points out:

"To pronounce upon the worth of this part of the book firsthand, intimate knowledge of the field of observation is required. This qualification William H. Keating, the scholarly and painstaking geologist and historian of Long's Expedition to the source of St. Peter's River in 1823, possessed in a high degree. The members of Long's expedition naturally gave Carver's account a more critical scrutiny under more favorable conditions than has been the case since or is likely to be in the future."

3954 Featherstonehaugh, of equal repute, and standing, in his profession with Keating, did make such an examination as Bourne thought necessary, and he made it with Keating's and Carver's accounts of their travels with him, and checking them up, as appears in his report, he came to the conclusion, as pointed out in the citation from his letter to Schoolcraft, that Carver was more accurate than Keating, who had so savagely criticized Carver.

Motion to strike out "savagely."

It is further incorrect, although there is room for difference of interpretation, in that Coues, a most eminent scientist and

scholar, made an exhaustive study of the Mississippi and St. Peter rivers in connection with this volume, and the 3955 expeditions of Zebulon M. Pike, and came to conclusions similar in spirit if not in detail to those that Featherstonehaugh came to.

Motion to strike out as to what his conclusions were.

Coues' conclusions are embodied in a footnote I have read in connection with the Bourne article. That last conclusion was my own.

Motion to strike out.

It appears in this text; I have stated it partially on that, but more particularly on my study of Coues' work.

3955 Schoolcraft in his *Thirty Years with the Indian Tribes* as shown by Bourne and as read into the record, his criticized the second portion of Carver's work and advanced the theory as to its origin, which has nothing to do with the personal foresight of Carver. Schoolcraft testified to his own belief that Carver visited the portion of the country which he claims to have visited.

3956 Featherstonehaugh went over the ground of the Long and Carver expeditions, and checked up the two accounts of Carver and Keating, and decided in favor of Carver as being the more accurate.

Greenhow in his *History of Oregon*, cited by Bourne, and read into the record, criticizes Carver's accounts as to the second portion of the book, as divided by Bourne in this study, but does not criticize the first portion which has to do with Carver's travels. I have here Coues' book referred to by Bourne on page 300 of the study. The volume is entitled "The Expedition of Zebulon Montgomery Pike, to 3957 Headwaters of the Mississippi River, through Louisiana Territory, and in New Spain, during the years 1805-6-7. A new edition now first reprinted in Full from the Original of 1810, etc., etc. In Three Volumes Volume I. New York: Francis P. Harper, 1895."

Coues is described in *Appelton's Encyclopedia of American Biography* as being a naturalist. Was born in 1842 in New Hampshire; received degrees of A. M., M. D., and Ph. D. from Columbian University of Washington. In 1869 became professor of Zoology at Norwich University of Vermont. Prior to this had a considerable career in the 3958 army. From 1873 to 1876 he was surgeon and naturalist to the United States Northern Boundary Commission. From 1876 to 1880 secretary and naturalist to the United

States Geological and Geographical Survey of the Territories. Has been editor and associate editor for years of the Bulletin of the United States Geological Survey of the American Naturalist, "Century Dictionary," and other publications, and the author of several hundred monographs.

Coues takes the Pike's Journal, prints it verbatim and accompanies it with a very exhaustive critical analysis. For instance, opening at random on page 164, I find two lines of the text and the rest of the page in very fine print devoted to Coues' notes. It is probably as exhaustive a study of such an expedition as any scholar has ever made.

3959 Coues is in my opinion abundantly qualified to speak on the relative merits of the accounts given by Carver, Keating and Featherstonehaugh.

I read from the text of Pike's Journal, Coues' volume 1, p. 59 (reading):

"Sept. 16th. Embarked late, as I wished Mr. Frazer to overtake me, but came on very well. His canoes overtook us at dinner, at the Grand Encampment (7½ miles) below Lake Pepin."

I read footnote 60 on p. 59, as follows (reading):

"'Grand Encampment' is a phrase in use since Carver's Travels first appeared. Carver first came to Lake Pepin Nov. 1st, 1766. Those who wish to verify the fact will find it on p. 34 of the Phila. ed. of 1796, which is commoner and therefore more accessible than any of the earlier ones; the London princeps, 1778, is a rare book; the place is p. 54 of this ed. On p. 35, Carver says the place was 'some miles below Lake Pepin.' This left the location in the air, especially as he does not say which side of the river, and various authors have raised such a fog about it that we might be excused if we failed to find it anywhere. By Pike as above, the place is between Buffalo r. and Chippewa r.; he starts late, noons
3960 on the spot, and gets into Lake Pepin at Dusk. On his return voyage, Apr. 15th, 1806, he stops at the place; he makes it on the right (west) bank, 9 m. below Lake Pepin. When Long comes by, in 1823, his boat party camps opposite the mouth of Buffalo r., just as Pike did yesterday; on the 30th of June they find themselves 'a few miles' below L. Pepin, and much concerned to discover Carver's 'fortifications:' See Keating, I, pp. 276-78.

3961 The upshot of their long discussion is the conclusion

that Carver did really see what he says he saw, but that the works he described were not at the Grand Encampment, where they found no fortifications. But this is clearly a non sequitur, or a *lucus a non*, or a *petitio principii*, or an *argumentum ad hominem*, or whatever, may be the logical definition of an illogical syllogism. It misses the point. The question is not one of identifying Carver's locality; the question is whether what he saw there was an artificial work or a natural formation. The place can be pointed out with the point of a pin stuck through the map, provided the topography has not changed too much for that during the century; for the point which now points to Carver's location is Point Teepeeota of the U. S. survey chart. The point above, at which Major Long's boat-party landed an hour or two later that day, and 'which appeared to correspond with the description' of the Carver's place, though their search here was likewise unsuccessful,' (p. 278), is the present site of Wabasha—the place where Nicholas Perrot is thought to have landed in 1683, and built a log fort, the first thing of the kind in all that country, afterwards marked on some maps as Fort Perrot. Teepeeota pt. is the projecting end of the long narrow sand-drift or sand terrace already mentioned as extending 9m. or more in the delta of the Zumbro; it strikes the Mississippi immediately below the Middle mouth of the Zumbro, and in fact determines the position of that opening. Teepeeota pt. is $4\frac{1}{2}$ m. direct above Alma, somewhat more than 5 m. by the channel. It is 3 m. direct below Wabasah a little more by the channel; it is 6 m. below the upper mouth of Chippewa r., say 7 by the channel. The Indian name would be more correctly rendered Tipiotah—tipi meaning a lodge or dwelling (such as is called 'wigwam' in novels, but seldom so on the spot—and the rest of the word denoting multitude; the papertown there, called Teepootah City, went up in smoke, 1859. The Island off Teepeeota pt., but a little lower down, is now called Grand Encampment isl. Of the accuracy of this identification I do not see how there can be any question, though time has modified the contour details in the course of nature, as well as in the course of the engineering work down there of late years. These fortifications of the river against its own sands are doubtless the only ones of any mag-

- nitude that have ever been made on the spot, before or since Carver; though there was nothing to hinder the Sioux from scooping holes in the sand drift and scuttling into them when the Chippewas came in sight, as we know they did at Prairie la Prose and elsewhere. Under these circumstances, I think the gentlemen of Major Long's party were as unjust to themselves in doubting their own identifications (in which they were supported by Hart, Rolette, and others who
- 3963 knew about the place), as they were to Carver in saying, p. 277: 'No gentleman of the party would be willing to ascribe to Carver a scrupulous adherence to truth, (personal observation having convinced them all of the many misrepresentations contained in his work.)' If this is meant to charge Carver with willful misrepresentations, I think it is unjust as well as ungenerous. Carver mistook a natural for an artificial work—so did William Clark, to the extent of drawing one to a scale and describing it in the terms of military science—so have done many professional archaeologists. Carver made mistakes, like the rest of us; he was often loose about instances, dimensions, and such things, he believed more things that were told him than a less honest and more wary wayfarer would have taken to be true; but I think he drew a short bow for so long a journey, had no occasion to deceive anyone but himself, and always intended to tell the truth as it seemed to him—in short, I do not see how his good faith can be seriously questioned. I accept Carver's statements, as I do those of Pike, Long, and other honest persons, for what they may prove to be worth."
- 3964 I call attention to footnote 30, in connection with the entry of April 12th in Pike's Journal, at page 198 (reading note):
- "Pike twice passed directly by Dayton bluff, in which this cave was situated—once Sept. 21st, 1805, and again to-day: see back, note 72, p. 75, for the locality, and add: The cave which Carter discovered in 1766 is thus described by him, pp. 39, 40, ed. of 1796; about 30 (say 15) miles below the falls of St. Anthony, at which I arrived the 10th day after I left Lake Pepin, is a remarkable cave of an amazing depth. The Indians term is
- 3965 Wakon-teebe, that is, the Dwelling of the Great Spirit. The entrance into it is about 10 feet wide, the height of

it 5 feet. The arch within is near 15 feet high, and about 30 feet broad. The bottom of it consists of clear sand. About 20 feet from the entrance begins a lake, the water of which is transparent, and extends to an unsearchable distance; for the darkness of the cave prevents all attempts to acquire a knowledge of it. I threw a small pebble towards the interior parts of is (it), with my utmost strength; I could hear that it fell into the water, and notwithstanding it was of so small a size, it caused an astonishing and horrible noise, that reverberated through all those gloomy regions. I found in this cave many Indian hieroglyphics, which appeared very ancient, for time had nearly covered them with moss, so that it was with difficulty I could trace them. They were cut in a rude manner upon the inside of the walls, which were composed of a stone so extremely soft that it might easily be penetrated with a knife; a stone everywhere to be found near the Mississippi. The cave is only accessible by ascending a narrow, steep, passage, that lies near the brink of the river." Now, it is easy to criticize such an account, and those who wish to discredit this honest gentleman seize upon 'amazing depth,' 'unsearchable distance,' 'horrible noise,' etc. But that is unfair. The phrases are only Carver's *facon de parler* of his subjective sensations; the objective reality is truthfully and recognizably described. Besides, one should be sure he is in Carver's cave before he criticizes the description—not get into another cave and then find fault with Carver because the wrong cave does not fit the right description, as our friend Schoolcraft did. The cave which Carver does not describe was not discovered until 1811. Long visited two in 1817; in 1823 Long's second party visited the New or Fountain cave, and Keating has left the matter in such clear light that the passage may be transcribed, I. p. 289 ed. of 1824: 'Above this village (of Kapoja), there is a cave which is much visited by the voyagers; we stopped to examine it, although it presents, in fact, but little to admire; it is formed in the sandstone, and is of course destitute of those beautiful appearances, which characterize the caverns in calcareous rock. It is the same which is described by Mr. Schoolcraft, whose name, as well as those of several of Governor Cass' party we found carved in the rock. In his ac-

count of it, Mr. Schoolcraft states it to be the cavern that was visited by Carver, but adds that 'it appears to have undergone a considerable alteration since that period.' It appears, from Major Long's MSS. of 1817, that there are two caves, both of which he visited; the lower one was Carver's; it was in 1817 very much reduced in size from the dimensions given by Carver, the opening into it was then so low, that the only way of
3967 entering it was by creeping in a prostrate position. Our interpreter, who had accompanied Major Long, told us that it was now closed up; it was probably near the cemetery which we have mentioned. The cavern which we visited, and which Mr. Schoolcraft describes, is situated five miles above; it was discovered in 1811, and is called the Fountain cave; there is a beautiful stream running through it,' etc. I think it is very likely the cave Long visited in 1817, and thought to be Carver's, was really the smaller one alongside Carver's in Dayton Bluff, of which I am informed by my friend, Mr. A. J. Hill, seeing how 'much reduced in size from the dimensions given by Carver' he found it. Beltrami, II, pp. 191-193, goes on about Carver's cave in a way which makes one think he entered no one of the three caves in this vicinity, but drew on his imagination for his description after reading up on the subject. He uses the phrase 'cave of Trophonius,' and says that 'the Sioux call this cave Whakoon-Thiiby'—a decidedly original way of spelling it. Featherstonehaugh describes his visit of Sept. 12th, 1835, to what he calls Carver's cave, p. 257 of his *Canoe Voyage*, etc., pub. 1847. Nicollet, who is always to the point, speaks of two caves, one 4 and the other 8 m. below St. Peters, Rep. 1843, p. 72: 'Both are in the sandstone, but at different elevations. The former is on a level with the river, and is reached
3968 through a short ravine along the limpid streamlet that issues from it. Many authors have thought this to be the cave described by Carver, but erroneously. It would, in fact, be only necessary to compare the locality with Carver's description, to be at once convinced. The cave now referred to is of recent formation. The aged Sioux say that it did not exist formerly. It has to them no ceremonial association. They scarcely ever visit it, and there are none of their hieroglyphics upon its sides or floor. It owes its formation to the dislocation and de-

composition of the upland limestone, which have left sloughy places; the waters of which have penetrated into the sandstone, wearing it away, and giving origin to the streamlet which issues from it. The location of this cave is on my map designated as the new case (New Cave.) The second, four miles below the former, is that scribed by Carver. Its entrance has been, for more than 30 years, closed by the disintegrated debris of the limestone capping the sandstone in which it is located. On the 3d day of July, 1837, with the assistance of Messrs. Campbell and Quinn—the former an interpreter for the Sioux, the latter for the Chippeways—I set about clearing this entrance; which, by-the-by, was no easy work; for, on the 5th we were about abandoning the job, when, unexpectedly, we found that we had made an opening into it, and although we had not entirely disincumbered it of its rubbish, I saw enough to satisfy me of the accuracy of Carver's description. The lake mentioned by him is there; but I could only see a segment of the cave, a portion of its roof being too near the surface of the water to enable me to proceed any further. A Chippeway warrior made a long harangue on the occasion; throwing his knife into the lake as an offering to Wakintibi, the spirit of the grottoes. The ascent to the cave is by a rapid slope; and on the rocks that form a wall to the left, there are a number of ancient Sioux Hieroglyphics, that mean nothing more than to indicate the names of Indians that have at various times visited this natural curiosity. On leaving the cave and reaching the river, a stroll of a few yards to the left, by keeping close to the rocks, brought us upon a sweet, limpid and copious spring which had remained for a long time unknown in consequences of the shingle and brush that conceal its outlet. This evidently the issue of the waters of Grotto lake; and their abundance indicates that the lake is well fed, and doubtless occupies a considerable space within the mountain. On the high grounds above the cave there are some Indian mounds, to which the Indians belonging to the tribe of Mdewakantonwans formerly transported the bones of the deceased members of their families,' as is stated by Carver, Pike, Long, and many others. I am led into this Long note partly for the purpose of setting history straight and partly from the intrinsic interest of

these Stygian caverns, which Pike passes today without notice, as hundreds now do every day and will do until the places are improved off the earth. The cave that Nicollet opened is the veritable one that Carver discovered; it is right on the railroad that skirts Dayton bluff, about a mile in an air-line from Union depot. The New or Fountain cave is miles away, in Upper St. Paul, near the railroad bridge there, unless it has lately yielded to the triumph of art over nature and been effaced. Mr. Hill writes from St. Paul, Mar. 18th, 1894: 'Before the shaving off of Carver's cave—or rather before our civil war—the serpent on the roof on the right hand as you stood on the brink of the waters was very plainly visible, and might have been traced by rubbing or otherwise; but this would have required scaffolding. It has been remarked that the serpent was the totem of Ottahtongoomlisheah, one of the Sioux chiefs of the 'Cave Treaty.' I found by actual measurement that the extreme length of the cave was 110 feet, before any alteration of the surface had occurred.' See also the article by Mr. Mill on Mounds, Minn. Hist. Soc. Coll., VI Pt. 2, 1891, J. Fletcher Williams, in Minn. Soc. Coll. I, 2d ed. of 1872, p. 355, notes that there was little change in Carver's cave in the course of a century, for it was much the same May 1st, 1867, when the Historical Society celebrated the centennial of Carver's purported treaty with the Sioux. 'Within the past two years, however, sad changes have taken place. The St. Paul & Chicago Railroad, having condemned for their use the strip of land along the river bank, including the bluff or cliff in which is the cave, have dug it down and nearly destroyed it. But a narrow cavity now remains to mark its site. The pool or lake is gone, and the limpid stream that flows through it now supplies a railroad tank.' But now, says Mr. Hill, 'sand heaped from railroad cutting has again back up the water into a pool, the receptacle of all filth.' Mr. T. H. Lewis' article, Cave-Drawings, Appleton's Annual Cyclop., 1889, p. 117 (reprint p. 3), gives the exact position of both the Dayton and bluff caves; the small one, 400 feet above Carver's, is 50 feet N. E. of Commercial St., midway between Plum and Cherry Sts., at the foot of the bluff; 35 feet long on the floor, as measured in 1889 to the edge of the water in the rear, 24 feet wide. 10 feet high—thus about one-third as

large as Carver's. It has pictographs like those of Carver's cave. None of those Carver mentions were ever copied; his cave was in part demolished by grading when the railroad first came, by and in the course of time the walls were scribbled over by the ubiquitous army of idlers and tramps from whose vandalism no natural formation or artificial monument in the world is secure."

3972 I now call attention to the volume entitled, "Expeditions of Zebulon M. Pike," page 329 and following, the page being headed Giacomo Constantino Beltrami. Beltrami was a member of Long's expedition in 1823, was ambitious to achieve a name as an explorer; in the course of his expedition with Long, he quarreled with Long, was dismissed and launched upon an extended expedition of his own, and has left an account of the whole expedition both with Long and after he left him. Whatever Beltrami may say about the Long expedition must be considered in view of this situation. Coues gives a higher estimate of his work than some others have done. Just as he stands stoutly by Carver, so he does by Beltrami, though admitting in certain respects Beltrami's book is open to criticism. I read from a footnote on page 329 (reading):

3973 "As I have already cited, the military mailed hand, let us see the fine Italian hand: 'Major Long did not cut a very noble figure in the affair; I foresaw all the disgusts and vexations I should have to experience,' II, p. 305; 'met a band of Sioux. The major thought he read hostile intentions in their faces; he even thought they had threatened him;—of course everybody else thought so, too—like Casti's Courtiers. * * * It was incumbent upon me, therefore, to be very much alarmed, too. * * * I rather thing the fright they threw the major into was in revenge for his giving them nothing but boring speeches. If they meant it so they had every reason to be satisfied,' II, pp. 336-37. 'Colonel Snelling's son, who shewed the most friendly concern and apprehensions for me. He also left the major at the same time, not without violent altercation. * * * With considerable regret I parted from Dr. Say, one of the naturalists attached to the expedition, the only one who deserved the designation. (This was a tickler for Prof. Keating's fifth rib),' II, 370. 'They (Colonel

Snelling, Major Talliferro, and others) were indignant against Major Long for acting towards me in the miserable manner that he did. With respect to myself, I feel towards him a sort of gratitude for having by his disgusting manners only strengthened my determination to leave him." II, 483. Beltrami was evidently
 3974 able to keep his own scalp, and his book is vastly diverting, except in the boggy places, where he mires us down with his gynaecosophy. It is entitled: *A Pilgrimage in Europe and America, Leading to the Discovery of the Sources of the Mississippi River*, etc. 2 vols., 8vo, London, 1828, pp. i-LXXVI, 1-472, and 1-545, Map and Plate. It is dedicated: 'To the Fair Sex. Oh, Woman!' The text is in epistolary form, ostensibly addressed to the Countess, and consists of 22 letters, 1821-3; matter of Julian sources, II, p. 409, *seq.*, and map."

I have made use of an index to this work to run down every reference to Keating and to Featherstonehaugh; found among others such criticisms and comments on Keating and on Carver as I have put into the record. I found only one
 3975 adverse criticism of Featherstonehaugh that may be regarded as serious, which I have referred to. Featherstonehaugh already makes it clear that in his opinion Keating made careless statements based on inadequate or at times long range observations. The general criticism Featherstonehaugh made on Keating's account on conditions along the Mississippi and St. Peter's river tallies very well with what one might gather from a study of Keating's book as to Keating's observations concerning the Chicago-Desplaines route. At the Chicago-Desplaines portage, Keating, although there in the springtime and forced to abandon his boat in Mud Lake, does not hesitate to adopt the report of others to the effect that this route was a very eligible one in springtime. He went further than to the Desplaines, and without further personal examination formed his conclusion as to the navigability at a different season of the year, and as to
 the ease of canal communication between the two rivers.

3976 *Wau Bun or The Early Day in the Northwest*, first appeared in 1856, enjoyed great popularity, has been principally used by historians, especially so far as it deals with the Chicago massacre of 1812. Moses in his *Illinois Historical and Statistical*, one of the standard histories of Illinois, published first in 1889, states that historians without

exception rely upon Wau-Bun for their account of the Chicago massacre. Moses, with some slight criticism relies upon it in that connection. Thwaites who edited the 1901 edition of Wau-Bun has said in his introduction, XIII (reading):

3977 "The early history of Chicago has much to do with the Kinzies and their connections. It is particularly fortunate that one of this family should have given to the world, out of the abundance of her recollections of the 'early day' what has become a classic in the historical literature of the Middle West—the Northwest of a half century ago."

Then follows a bibliographical account of the Kinzie family which was apparently drawn almost exclusively from this volume, which indicates that Thwaites evidently had confidence in it by having relied upon it for the facts used in his introduction (reading):

"XVIII. The footnote to the opening page of chapter XVII of Wau-Bun (page 155 of our text) says that her story of the massacre was first published in 1836; but apparently no copies of this early publication are now extant. Mrs. Kinzie's narrative was of course obtained from first hands, her husband and other members of her family having been witnesses of the tragedy; it has been accepted by the historians of Illinois as substantially accurate, and other existing accounts are generally based upon this. With slight variation, the contents of the pamphlet were transferred to the pages of Wau Bun, of which they constitute Chapters XVIII, XIX, and XX. * * * It has been accepted by the historians of Illinois as substantially accurate, and other existing accounts are generally based upon this. * * *

3978 XIX Wau-Bun gives us our first, and in some respects our best, insight into the 'early day' of the old Northwest."

I now read from the footnote on that page (reading):

"Similar reminiscences, almost as excellent in their way, but more limited in scope, are: Mrs. Charlotte Ouisconsin Van Cleve's *Three Score Years and Ten* (Minneapolis, 1888), and Elizabeth Therese Baird's articles in vol. XIV and XV, *Wisconsin Historical Collections*."

Elizabeth Therese Baird is the woman from one of whose articles I have heretofore read, and this reference is in part

of that article. Continuing to read from Dr. Thwaites introduction, read (reading):

- 3979 "The graphic illustrations of early scenes which the author has drawn for us are excellent of their kind, indicating an artistic capacity certainly unusual upon the American frontier of seventy years ago. But better than these is the text itself. The action is sufficiently rapid, the description is direct, and the style is unadorned but makes the story appear to us the more vivid. Upon her pages we seem to see and feel the life at the frontier military stockades, to understand intimately the social and economic relations between the savages and the government officials set over them, to get at the heart of things within the border country of her day. It is the relation of a cultivated eye witness, a woman of the world, who appreciates that what she depicts is but a passing phase of history, and deserves preservation for the enlightenment of posterity. Many others have, with more or less success, written narratives within the same field; Mrs. Kinzie herself occasionally trips upon dates and facts, and sometimes she deliberately glosses where the antiquarian would demand recital of naked circumstances; but take Wau-Bun by large and small, and it may safely be said that to students of the history of the Middle West, particularly of Illinois and
- 3980 Wisconsin, Mrs. Kinzie has rendered a service of growing value, and of its kind practically unique.

It is fitting that the Caxton Club should publish a new edition of this early Chicago classic, with the needed accessories of notes, index and additional illustrations. The book deserves to be better known of the present generation, who will find in it a charming if not fascinating narrative, giving them an abiding sense of the wonderful transformation which seventy years have wrought in the development of the Old Northwest."

What Dr. Thwaites presents here agrees closely and with entire accuracy with the general estimates historians have put upon this work down to the present day. What he says about the volume is justified to a certain extent in my opinion, so far as the greater part of the volume is concerned, as it deals with conditions contemporary to Mrs. Kinzie. What Dr.

- 3981 Thwaites says about the part which deals with the Chicago massacre is not justified, in my opinion, for that

event occurred in 1812 when Mrs. Kinzie was but a child living in New England. She depended upon other sources for information she gives us concerning it. Viewed as a solid historical work to be taken up, used and examined in the critical fashion as by Dr. Cones or a trained historian, I don't think it justifies the high estimate that is generally put upon it. Mrs. Kinzie was not a trained historian, did not weigh her words carefully; if she did, she strove for literary effect. I cited Wau-Bun not because I hold it valid in every statement or detail, but rather because of the estimate of the work by such men as Dr. Thwaites, to whose opinions the government attaches great importance. I stand practically alone in my lower estimate of the work. While Mrs. Kinzie may be wrong, and doubtless frequently is in error on question of detail, she is not so likely to err about matters describing general conditions. For example, Dr. Thwaites is well qualified to speak upon the manner of life of the French voyagers. Mrs. Kinzie has given specific and interesting description of this thing. Thwaites having read it over, has taken no exception to her descriptions. For example, he says in his introduction (reading):

"XIX. Wau-Bun gives us our first, and some respects our best, insight into the 'Early Day' of the old Northwest. The graphic illustrations of early scenes which the author has drawn for us are excellent of their kind."

3983 My references from this book have been with reference to conditions contemporary to the author, Mrs. Kinzie; to general conditions, concerning which it seems to me one may reasonably attach greater weight to her statements than he might to a matter of specific detail.

I have examined and made an analysis of those portions of the book entitled Incidents and Events in the Life of Gurdon Saltonstall Hubbard, referred to by complainant's witness Alvord, at transcript, pages 263-270 (Abst., 118-122), and the paper of Gurdon S. Hubbard in 1818, read before the State Pioneer Society, appearing on transcript, pages 270, 272 (Abst., 122-123). Hubbard first came to Chicago, September 30th, 1818, stopped a few days, then went with the fur brigade down the Desplaines river to the Illinois, an account of which passage down the river is found in Hubbard, beginning on page 39. On page 41 it appears the voyage down the Desplaines was resumed to Isle la Cache where low water again compelled them to unload their

goods to pass over the shoal that presented itself there. Here they camped again after a hard day's labor.

Motion to strike out on the ground that the witness is paraphrasing language of authorities.

COUNSEL FOR DEFENDANT. If the objection is sustained, will move to strike out all conclusions and general statements as to contents of books and narratives given by complainant's witnesses.

3985 On page 43 of the same account of the same journey, having given an account of the passage over the shoals referred to on page 41, he says the progress was very slow, that most of the distance to the Illinois their goods were carried on their backs, lightened boats were pulled over shallow places, often on poles and dragged over the rocks and shoals. Three weeks occupied in reaching mouth of Fox river. Two days more to bring them to Starved Rock. As to the account by Hubbard on page 41, how Isle la Cache gained its name, we observe that it is not accurate.

3986 Mr. Sara being the man, I presume, who was identified by Alvord in this case, Isle la Cache could not possibly have gotten its name from any such circumstances as Hubbard describes. I say that because the name Isle la Cache appears as early as 1699 in the sources; Sara came, according to Alvord's testimony about the Cahokia and the Kaskaskia records, to the Illinois country between 1750 and 1760. Sara was one of the prominent characters in lower Illinois, whom George Roger Clark had to deal with at the time of the Revolution. Obviously Isle la Cache could not have been named after him, as the name was used as early as 1699.

Objection and motion to strike out; witness paraphrasing authorities. (Understood between counsel that motion need not be renewed where applicable.)

3987 I now turn to pages 59 and 60 of Hamilton's Hubbard, appearing on transcript, page 269. Hubbard's account of the first return from the lower Illinois country to Chicago. They spent the winter on the Illinois (p. 59), and on March 20th, began to return with the winter's load on the journey to Mackinac. He points out that there was

3988 high water in the Illinois, the current was swift, and the rapid strong. They made from Starved Rock to Cache Island only from six to ten miles per day, being glad to camp early and give the men needed rest. From Cache Island they hoisted their sails, the wind being strong from the southwest, passed rapidly up the Desplaines through Mud Lake to the

south branch regardless of course of channel. It is evident that the water was so high that this indicates nothing as to the normal state of the Desplaines. Hubbard already had said that only in very wet weather, was there water enough to float a boat through Mud Lake and the portage. Page 104 (reading):

3989 "I expressed my desire to again go out with the Illinois 'brigade,' giving my reasons therefor; and these, aided by Mr. Deschamps' solicitations (he claiming that he had only consented to part with me for a year, expecting me to return and take charge of the boats on the Illinois river), induced Mr. Crooks—though reluctantly—to give his consent to my going out with my old friend and comrade. In due course of time our 'brigade' started, the twelve boats led by Mr. Deschamps and the old familiar boat song. I was again with my old companions, all of whom gave me a cordial welcome. Day after day we pursued our voyage, the ever monotonous row, row, being varied by no incidents of interest, until we reached Chicago. We had made an unusually quick trip, having been delayed by adverse winds but two or three days on the entire journey. Again I was rejoiced with a home in Mr. Kinzie's family, and remained there for several days until the 'brigade' again moved for the Illinois river."

I now call attention to the passages immediately following as found at transcript, page 506 (Abst., 221). Here we have the account of the second season spent in the Illinois country.

3990 Pages 104-105 give us the description of the passage of the Chicago portage to the Desplaines river. Water unusually low; Desplaines could be crossed in places without wetting soles of the feet. Had to carry all goods from Chicago river to Desplaines on their backs, encountering the usual fatigues in descending the river. "The usual fatigues" was explained on account of the passage down the river the first time in the preceding year. Hubbard indicates that the water was even lower than in 1818, and it is reasonable to infer that the fatigues were even greater than in the preceding year. Then occurs (p. 116, Hamilton's Hubbard), the account of the second return from the lower Illinois to Chicago (reading):

"About the 1st of April we resumed our journey toward Mackinaw"—the point in view being the brigade at Beason's Post on the Illinois river—"Proceeding

leisurely, and reaching Chicago in due season, where, as usual, I found a warm welcome from the Kinzie family and officers of the fort. A week or ten days was thus joyfully spent, and I deeply regretted the day of our departure."

No details are furnished of the second passage up the
3991 Desplaines. Turning to the account of Hubbard's third season on the Illinois, I read from his life, page 121 (reading):

"This incident served for a standing joke, and many times was the laughter renewed when the ludicrous affair was again presented to our minds. Although we had enjoyed ourselves so much at his expense, we learned to like him for his many good qualities, and when we parted with him at Peoria, it was with many and sincere regrets."

Thus it appears he is about to describe the journey up the Illinois river from Peoria and onward. I read again (reading):

"Our trip was a tedious one, we being kept many days in camp by heavy adverse winds. We were nearly a month in reaching Chicago, where, as usual, I was welcomed by my friends, the Kinzies, who, with Dr. Wolcott, rendered me many kind services.

3992 At Chicago I found Pierre Chouteau, Jr., of St. Louis, whose acquaintance I had formed several years before, and who now proposed that I should enter their employ at the expiration of my engagement with the American Fur Company; during my two weeks' stay we became very intimate. The officers of the fort were good companions, and I passed much of my time with them, and very pleasantly, and much regretted the time of parting.

We encountered the usual trials and hardships between Chicago and Starved Rock, and in due season arrived at Bureau Post, where I had passed my first winter, and Mr. Beebeau having died since our departure the previous spring, I was placed in charge."

From this it appears there were no details of the trip up the river from Peoria to Chicago. In a general account it appears they were nearly a month passing over the distance and the trip was a tedious one. As to the next trip down the river from the citation just read, they encountered the usual trials and hardships between Chicago and Starved Rock. No

further details are given. I now turn to Hubbard's Life, 3993 page 124, cited at transcript, page 957 (Abst., 400); an account of the return from the lower Illinois to Chicago in the spring of 1822. It states they had accumulated more furs and peltries than their boats could carry up the Desplaines, so he was dispatched with four boat loads to Chicago, which were stored with John Crafts, and returned to the brigade when they all moved forward on their annual return to Mackinaw. On page 129, Hamilton's Hubbard, appearing at transcript, page 509 (Abst., 222) it appears that the following year Hubbard was stationed on the Iroquois river, and decided on his return from Mackinaw to pass his boat over the St. Joseph-Kankakee route to save the remainder of the trip by

Chicago and the delays and hardships of the old route 3994 through Mud Lake and the Desplaines. Passing to page 136, the chapter beginning "1824.—Placed in Charge of the Illinois River trading posts," which has been read into the record; this shows that in 1824, Hubbard is put in charge of the Illinois river trade of the American Fur Company. He gave up the use of the Desplaines river, and determined to scuttle his boat in the slough at Chicago and transport the goods to the Illinois country and the furs back from there by means of horses; the reason for it being this: To avoid the long, tedious and difficult passage through Mud Lake and down the Desplaines.

The life of Hubbard, pages 150-151, is an account of the trip of General Cass by way of the Fox and Wisconsin rivers and the Mississippi to St. Louis, up the Illinois and Desplaines to Chicago at the time of the Winnebago war. Here is given an account of Cass' trip in 1827 from Green Bay by way of Prairie du Chien and St. Louis, thence up the Illinois and Desplaines to Chicago, which required thirteen days to consummate.

3996 Have examined extracts from Hubbard as to the Desplaines given on behalf of the United States, and the testimony of McLaughlin in that particular, transcript, pages 770 and 771 (Abst., 321). McLaughlin concludes that we have here distinctly a primary source, an account by a person who actually used the river, and therefore would actually receive great weight. He would accept it at its face value as showing that Hubbard made the trip down the Desplaines though with some difficulty; that on his return, he passed up the Desplaines through Mud Lake into the south branch of Chicago and on

to Chicago without portage. Relative to Hubbard's change of plan, using horses instead of boats below Chicago, McLaughlin concludes that this shows that the ordinary method of passage, though long and tedious, was through Mud Lake and down the Desplaines, and that the important point in this connection is the reasonable conclusion that the passage by Mud Lake and into and down the Desplaines river was an ordinary well known passage and had been used and was in use at that time.

I observe with reference to this conclusion that this passage shows the Desplaines was navigable to about the same extent and in practically the same way that it shows that Mud Lake and the portage from Mud Lake to the Desplaines were navigable. The two portions of the route stand on practically the same basis. Granting for the moment, that McLaughlin's conclusions are valid ones as he has stated them, they show nothing as to the navigability of the Desplaines which does not apply to the navigability of Mud Lake and the portage between Mud Lake and the Desplaines.

Motion to strike out with reference to navigability.

3998 With reference to Thwaites' conclusions on Hubbard and use of Desplaines river as shown by Hubbard (Trans. p. 960, Abst., 402) he stated among other things:

"That in places they found sufficient water to float the loaded boats, but in some other places they were obliged, from insufficiency of water, to unload the boats. Now I do not find in this detailed account by Mr. Hubbard, any evidence that the fur traders were obliged to take the boats from the water in these passages, but they were at times forced to use poles to get them over the rocks and shallows."

To my mind in that connection, there is no material distinction between taking the boats from the water and putting the boats on rollers, because there was no water from which to take them. Hubbard points out in the detailed account given of the first passage down the Desplaines, page 43 (reading):

3999 "Our progress from this point was very slow indeed, and most of the distance to the Illinois river our goods were carried on our backs, while our lightened boats were pulled over the shallow places, often being compelled to place poles under them, and on these drag them over the rocks and shoals."

Evidently they had reached a place or places in the river, for he says they were often compelled to do this where there was no water, which is to all practical intents and purposes, from which to take the boats.

4000 Further from Dr. Thwaites' conclusion, transcript, page 961 (Abst., 403):

"In the spring time these same boats, heavily laden with furs, returned to Lake Michigan, by the Desplaines and the Chicago rivers without difficulty."

That conclusion is inaccurate, it seems to me; Hubbard's account shows there was difficulty in returning up the river with these loaded boats in the spring. My conclusions from Hubbard's narratives are that it shows for about six years, from 1818 to 1824, the Desplaines river route was used by the American Fur Company traders, ordinarily twice yearly, that is, in the spring and in the fall. There was one year when Hubbard returned by way of the St. Joseph-Kankakee route. My impression is that other traders who were not stationed on the Iroquois went down by the usual route. I recall

4001 no specific statement to that effect. That each fall they passed down the river with loads of goods for winter trading, but so far as the Desplaines is concerned, the passage was made with great difficulty, the goods being carried on the men's backs, and the boats transported on rollers or poles much of the way. The route was so difficult that Hubbard on getting control, immediately abandoned it for the use of horses, a plan which he had long intended. Each spring boats came up the river in time of high water and passed with toil and difficulty into the Chicago. That this was in time of high water is shown in part by the specific accounts of passages in Hubbard's statement, page 39 of the Life, that only in wet seasons would Mud Lake float a boat, yet we find from these accounts of the return of the fur brigade during these years that not only Mud Lake but the portage as well could be sailed over regardless of the course of the river channel. So I conclude that at such a time the prairie generally was inundated.

Referring to Thwaites' conclusions as to Cass appearing on transcript, page 962 (Abst., 403), "This exhibits the fact that the Chicago-Desplaines route was well known at the time, and Cass, as a government official, used it as a desirable one to pass from the Mississippi to the Great Lakes." I have studied Cass' trip in connection with Hubbard's reference to it.

I would observe with reference to this conclusion of
4003 Thwaites that Hubbard's narrative in itself does not supply sufficient data for forming a conclusion as to why Cass chose this route. Reference to other well known sources makes it clear that Cass ran great risk in passing through the hostile Winnebagoes on his way down to St. Louis; that he could not expect to return the same way with the war now fully on, and therefore to get back to Green Bay at all, he must come by way of the Illinois, therefore, Thwaites' conclusion that he used this route as a desirable one is unwarranted. Even though it be conceded that it was practicable for Cass to have returned to Green Bay by way of the Fox-Wisconsin route, he may well have come the Chicago way to warn the settlers at Chicago of their danger from the Indians, this being in part the purpose of the expedition in which he was engaged.

4004 My authorities for that statement are Schoolcraft's *Thirty Years with the Indian Tribes*, pages 266-267; *Smith's Life and Times of Lewis Cass*, pages 187-190.

COUNSEL FOR GOVERNMENT. I will ask counsel in view of his statement that in case the objection which I have been making should be sustained, he will move to strike out all answers by government witnesses in which they stated in their own way what was said in authorities on which they relied—I will ask counsel to point out before the close of his evidence just what statements of government witnesses he objects to on the ground raised by my objection; and I call attention to the fact that my objection is not to the right of the witness to explain passages by the use of extraneous matter or to give his interpretation of passages in the light of extraneous matter, but is solely to the statement by the witnesses as to what the passages are, over the objection of the government.

4005 I call attention further to the fact that the government's objection was made on this point only after counsel had stated in effect or at least refused to state that he would not rely upon the witnesses' statement of what the passages said, even though the statement itself was put in evidence.

The WITNESS (continuing): The reference to Schoolcraft, page 266, is an entry under the heading, "8th of June, 1827." That which precedes what I read gives an account of Schoolcraft's embarking for Green Bay to attend the treaty of Butte des Morts in June; the incidents of the trip, news of the out-

break of the Winnebagoes farther to the west and southwest (reading):

4006 "The replies of the leading chief, Four Legs, were evasive and contradictory; in the meantime, reports from the Wisconsin and the Mississippi rivers denoted this tribe ripe for a blow. They had fired into a boat descending the Mississippi, at Prairie du Chien and committed other outrages. General Cass was not slow to perceive or provide the only remedy for this state of things, and, leaving the camp under the charge of Colonel McKenney and the agents, he took a strongly manned light canoe, and passed over to the Mississippi, and, pushing night and day reached St. Louis, and ordered up troops from Jefferson Barracks, for the protection of the settlement. In this trip, he passed through the center of the tribe, and incurred some extraordinary risks. He then returned up the Illinois, and through Lake Michigan, and reached the Butte des Morts, in an incredibly short space of time. Within a few days, the Mississippi settlements were covered; the Winnebagoes were overawed; and the business of the treaty was resumed, and successfully concluded on the 11th of August."

4007 I read from Smith's Life and Times of Lewis Cass, page 185 (reading):

"The council was opened, and while holding it with the Indians at that place, a runner came in with the startling intelligence, that the Winnebagoes, who were expected, instead of attending, had broken out into hostilities, and had actually attacked the settlements. At that time, the communication between Green Bay and Prairie du Chien, upon the Mississippi river, where these events were passing, was by water up the Fox river about two hundred miles to the portage, thence across to the Wisconsin and down that stream to the Mississippi, which it enters three or four miles below Prairie du Chien. General Cass embarked in a birch canoe with fifteen paddles to visit the scene of difficulty, and to take such measures for the protection of the people and for restraining the Indians as might be found necessary. He ascended the Fox river, crossed the portage, and descended the Wisconsin about ninety miles; there he met a boat coming up, belonging to the American Fur Company, with some of their traders on board, from

whom he first learned the true state of things, which was more alarming than he had anticipated. The Winnebagoes had struck at some of the settlements about the Prairie, and fire and blood had, as usual, marked their
4008 course. They were at open war, and preparing to attack the frontiers, where the alarm was naturally very great. Some of these traders were intelligent men, well acquainted with the Indians, and enjoying their confidence, which was proved by the fact that they were permitted to proceed with their party upon their voyage without molestation, for the Indians feel much kindness towards the traders who treat them well. They urged General Cass not to proceed farther, but to turn back, as he had no force, and his position would be a very dangerous one. They said the Winnebagoes told them they should shut up the portage path, and that no other boat after theirs should pass. However, General Cass felt that he could not yield to these representations, though he felt their weight, but he felt also the necessity of continuing his mission at all hazards, as the consequences were all important to that district of country. The traders told him that the hostile Winnebagoes were encamped upon a high prairie some thirty miles lower down. Approaching the place indicated, the Indians were seen from the canoe to be in an evident state of agitation, moving rapidly about and watching the descending party. The flag of the United States was flying from the canoe, and though the Indians did not know who was in it, they saw at once that the movement was an uncommon one,
4009 and that probably some public officer was on board. General Cass directed the boat to approach the shore as near as possible, and then debarking with his interpreter and secretary, he ordered the crew to paddle out into the middle of the stream, and there to await the result. He then ascended the high bank where the Indians were assembled and the first thing which struck him was the sight of the squaws and children who were running away across the prairie. It is always a bad sign with the Indians when their women and children flee from the meetings which they hold with the white man.

On approaching the Indians, they received General Cass coldly, but without any direct demonstration of hostility. Some of the chiefs had been in council with him

and knew him, and all of them soon learned that he was their American father, charged, under their great father the President, with all the business between them and their white brethren. A conversation took place, and after awhile the pipe, that indispensable instrument of consultation, went around, and they seemed to be a good deal mollified. General Cass remonstrated with the chiefs in a firm tone against their dangerous proceeding, and stated their inevitable destruction, should they continue in their course. He invited them to come to Green Bay, where a council was then sitting, and if they had any just causes of complaint, he requested them to make
4010 them known to the commissioners, and assured them that justice should be done to them. An hour or two was spent in this intercourse, and the elder chiefs evidently became impressed with the conviction that they had placed themselves in a dangerous position, and they promised to do all they could to restrain their young men, and also that they would attend the council at Green Bay. The interview seemed to pass off well, and the conduct of the Indians, so far as came within the observation of General Cass, was respectful. The young men surrounded the chiefs, listening attentively in the usual Indian manner, but without saying a word. They always evince on these occasions great deference, the effect of which is, however, destroyed by the first impulsive movement. When General Cass had taken leave of the chiefs, and turned away from them, a young man suddenly leveled his gun at him and pulled the trigger, but luckily it missed fire. He was immediately seized by the chiefs, and his gun taken from him. It was obvious that the chiefs were afraid to commit an act so flagrantly hostile as would have been the murder of the representative of the United States in one of their councils, and therefore instantly arrested the act of the young man. The party re-embarked in their canoe, and continued their voyage to Prairie du Chien, which they reached
4011 without further accident, though several parties of hostile Winnebagoes were roaming about. At the Prairie General Cass found the inhabitants in the highest state of alarm, having resorted to the old unoccupied fort. He took such measures as were in his power to provide for the immediate danger and to organize the people for their defense, and he promised them to repair with all

speed to St. Louis, and there to place himself in communication with the Superintendent of Indian Affairs and with the general commanding the troops of the United States, and to have a force sent up without delay for their relief. At Fever River, now Galena, the miners had been driven in and the settlements broken up. Boats upon the Mississippi had been attacked, and the danger was rapidly spreading. General Cass stopped at Fever river, where the inhabitants were assembled. He gave them his advice, and explained to them his mission. At that time, on the right bank of the Mississippi, down to the Missouri line, there were no settlers, and but few on the left bank. On a recent excursion to Rock Island and Burlington, on the opening of a railroad, General Cass adverted to the wonderful difference he found in the condition of the country after an interval of twenty-eight years,—a change which resembles rather the dreams of an Eastern imagination than the sober realities of actual life. Arrived at St. Louis, the necessary arrangements
4012 were immediately made for the protection of the frontier, and a force was dispatched which reduced the Winnebagoes to obedience. From St. Louis General Cass ascended the Illinois in his canoe and passed into Lake Michigan, by the water communication, without leaving it.

At the head of the Desplaines, a branch of the Illinois which approaches near Chicago, is a shallow lake, appropriately named Mud Lake. The party entered it towards evening, and it soon became so dark that they could not discern the bank. The lake was covered with the broad leaves of a kind of lily, favorite haunts of disgusting looking water snakes." * * *

Omitting the portion which has been read in connection with Lee's testimony. (Reading, p. 189):

"In the almost fabulous progress of our country, there are few greater marvels than the change which a few years has wrought by the building up of the great city which now occupies that spot, then so lonely and exposed. It is difficult to conceive that but the other day,
4013 as it were, silence and solitude spread over all those regions, interrupted only by the Indian, or by the wild animals, his cotenants of the forest, whom God has given to him for his support.

From Chicago to the point of departure at Green

Bay, the voyage was upon Lake Michigan, and was happily terminated after a rapid passage.

General Cass made the trip from Prairie du Chien to St. Louis in six days, notwithstanding the stoppage at Fever river—the shortest time then known.

Great anxiety was felt at Green Bay, in the meantime, for the General's safety, rumors having reached there that he had been massacred by the Indians, on his way down the Wisconsin river. As soon as the troops left St. Louis, he set out on his return to Green Bay, by the way of the Illinois river and Lake Michigan, in the same canoe, and reached the treaty ground in safety, having traveled a circuit of about eighteen hundred miles, with unprecedented rapidity. His celerity of movement, and the alacrity with which the United States troops responded to his call, probably averted a war that might have embraced the whole northwestern frontier. He met now, at the treaty ground a large body of Indians, reputed to number three thousand. These he addressed, advising them to preserve the peace, but taking good care to let them know that, if they wanted war, they would find their great father prepared for them.

4014 General Cass having, in some degree, allayed the excitement and, by bold measures, awed them into apparent friendship, proceeded with the council, and the commissioners concluded a treaty on the fifteenth of September, at the Butte de Morts—Hillock of the Dead."

The WITNESS (continuing): As to Hubbard's account of Cass during the Winnebago war, he says, pages 150-151, *Life of Hubbard*, Cass was at Green Bay, heard news of trouble with Indians, got into a light canoe with twelve men at the paddles and a steersman, went by way of Fox and Wisconsin rivers to St. Louis, thence by steamer to mouth of Illinois, and thence in a canoe up the Illinois to Chicago. This trip from Green Bay was done in about thirteen days, the governor's party only sleeping five to seven hours, averaging 60 to 70 miles a day. He says they passed the Winnebago encampments without molestation, as they did not stop to
4015 parley but passed rapidly by and were out of danger before the Indians recovered from surprise. As to the time of this trip, Hubbard states the Pottawattomies' annual payment was in September, 1828. On page 149 he states that the night following the payment there was a dance in the sol-

diers' barracks. A storm arose about midnight and the quarters were struck by lightning and were consumed. Six or eight days thereafter Cass reached Chicago. According to Hubbard, therefore, Cass reached Chicago sometime in September or the early part of October. As to these statements of Hubbard, on pages 150-151, and further references just given in connection with Hubbard's Life, Young in his Life of Cass, page 96, says Cass is said to have made the trip from Prairie du Chien to St. Louis in seven days, the shortest time 4016 then known. The book is entitled "Sketch of The Life and Public Services of General Lewis Cass," etc., by William T. Young, published by E. H. Butler & Co., 1853. Page 96. (Reading):

"In the course of two months, occupied on business relating to this movement of the Indians, Gov. Cass travelled three thousand five hundred miles. He is said to have made the trip from Prairie du Chien to St. Louis in seven days, the shortest time then known."

Schoolcraft, in his *Thirty Years Among the Indian Tribes*, pages 266 to 267, writing under date of June 8, 1827, which passage is in the record, says the council was held at Butte des Morts; that there Cass learned of hostilities and made his start. That he took a strongly manned light canoe, and pushing night and day, reached St. Louis. On the trip he passed through the Winnebagoes, and incurred extreme risks. That he returned up the Illinois and through Lake Michigan and reached Butte des Morts in an incredibly short space of time, and business of treaty was resumed and concluded August 11th. Smith's *Life of Cass*, 4017 pages 185-190, which have been read into the record, gives further details as to this trip of Cass. There are minor inaccuracies in the book. Do not assume responsibility for all statements made in this section cited as corroborative to and giving further corroborative details as to the facts concerning Cass' trip. At page 186 as read into the record, Smith describes the danger Cass incurred in passing through the Winnebagoes. That he stopped and parleyed with them, that a young Indian undertook to shoot him during the parley. On page 188 is a description of the passage through Mud Lake. States they made trip up the Illinois to Chicago without leaving canoe. Spent the night in their canoe in Mud Lake in intense rain. Pages 189-190 state they made trip from Prairie du Chien to St. Louis in six days, notwithstanding the delay at Fever river.

4018 I now call attention to 5 Wisconsin Historical Collections, the particular volume edited by Lyman Draper; the article occurred on pages 156-7, headed "Gen. Cass on the Winnebago Outbreak, 1827," which gives an account of the speech delivered by Cass at Burlington, Iowa, June, 1855, in which he described this affair. He states he ascended the Illinois in his canoe and passed into Lake Michigan without getting out. Water filled the swamps at the head of Chicago river, enabling the voyagers to navigate through without serious difficulty. The article is printed under the editorial direction of Lyman Draper. The distances passed by Cass in this journey were from Green Bay to Prairie du Chien, 285 miles; from Prairie du Chien to St. Louis, by the Mississippi river, is 542 miles; from St. Louis to La Salle, by Illinois river, 303 miles; from La Salle to Chicago is approximately 100 miles; total distance traveled, approximately 1230

4019 miles. Hubbard puts date of trip in September or early October. Schoolcraft, in *Thirty Years Among the Indian Tribes*, shows that Cass was back at Butte des Morts, had concluded the war and had signed the treaty by August 11th. I now refer to Wisconsin Historical Collections, Vol. 2, pages 329-330, article headed, "Pioneer Life in Wisconsin. By Col. Daniel M. Parkison, of LaFayette County, Wisconsin," with editorial comment by Lyman C. Draper.

4020 Objection to introduction of passage unless further qualification by stating who Parkison was.

The WITNESS (continuing): Parkison states in this article that Cass on this expedition reached Galena on July 6th. In this same volume, Appendix No. 6, page 98, I refer to the article "Early Times and Events in Wisconsin, by Hon. James H. Lockwood, of Prairie du Chien," edited by Lyman Draper. This states (p. 166) with reference to this same trip of General Cass, that he reached Prairie du Chien on the morning of July 4th. The article states that the distance from Prairie du Chien to Galena is 90 miles on the Mississippi river.

4021 Further as to Hubbard, he states that on the Wisconsin river Cass passed the Winnebago camps without molestation. That they did not stop to parley, passing rapidly by, singing their boat songs. Indians were taken by surprise, and before they recovered, the canoe was out of danger. Cass himself, 5 Wisconsin Historical Collections, 156-157, says he stopped at the Winnebago camp; talked with the Indians and smoked the Calumet. Afterwards learned that one of them tried to shoot him, but was prevented by the others. I con-

clude with reference to the whole account Hubbard gives of Cass' Expedition in connection with authorities I have cited, and my general knowledge on the subject, that this account being in the nature of reminiscences, written about a half century after the events described, this particular narrative abounds in errors and incorrect assertions. He states 4022 the time as 1828. It being in fact, 1827. He puts the season as September or early October. It was in fact the month of July, Cass being at Prairie du Chien on July 4th, at Galena on July 6th, according to the extracts cited; the distance between Prairie du Chien and Galena is 90 miles, and we know he stopped at Galena for a day or a part thereof. These accounts, therefore, independent of each other, corroborate one the other as fully as one could expect or desire. As to the conclusion of his journey when he reached Chicago, I estimate he was there approximately from the 18th to the 20th of July; at Prairie du Chien on the 4th; Galena on the 6th, and it required some six or seven days to go down the river to St. Louis. Hubbard says Cass made the 4023 trip from Green Bay to Chicago in about 13 days, averaging 60 to 70 miles a day, sleeping 5 to 7 hours per night. Schoolcraft, who wrote at the time, not a half century later, states they pushed forward night and day. The distance on this route from Green Bay to Chicago was approximately 1230 miles. Of this distance 560 up stream, and 660 miles down stream. It took 7 days, according to one account, six days according to another, to go from Prairie du Chien to St. Louis down the Mississippi, the best part by far of the journey, leaving according to Hubbard, 6 or 7 days to make 690 miles, of which 570 were up the Fox and Illinois-Des-4024 plaines rivers. As to Hubbard's statements they averaged 60 or 70 miles a day, if they made the trip in 13 days, and the distance is 1230 miles, they averaged 95 miles a day approximately, or else the other conclusion is inevitable,—they did not make it in 13 days. If they averaged 95 miles a day for the whole trip, upstream and down, it is improbable that they took seven days or six days, to make the 542 miles down the Mississippi. This would be, to use the number six, the more favorable number, so far as the validity of Hubbard's narrative is concerned, an average of ninety miles a day, and according to Hubbard it must have been an average of something like 95 miles a day upstream and downstream alike, on the Fox-Wisconsin, the Illinois, the Desplaines and the

Mississippi. Hubbard states Cass remained at Chicago but a few hours. Either then these things which are contained in Hubbard's account of Cass' expedition were all related at this time in the course of a few hours and Hubbard treasured them in his memory for upwards of half a century, or else Hubbard's information was gained from other sources. I think it reasonably evident that if the latter is the conclusion that must be accepted, that the modern historian is more
4025 competent to describe and state the facts concerning his expedition than Hubbard himself was. I conclude that this trip was not made in 13 days, that Hubbard's account is untrustworthy as to details, and therefore McLaughlin's deduction as to the character of the Desplaines river navigation, based upon this account, is unwarranted.

4026 I am familiar with Thomas Hutchins' Topographical Description. My attention is directed to the excerpt, transcript page 763 (Abst., 318) (reading):

"The Illinois river furnishes a communication with Lake Michigan by the Chicago river and by two portages between the latter and the Illinois river, the longest of which does not exceed four miles,"

and the conclusion of McLaughlin in regard to that (Trans., 763; Abst., 318):

"This appears to indicate that this was a route used since the word 'portages' is employed, and that it was from Chicago to the Desplaines or vice versa."

4027 Hutchins' book is considered on the whole good authority, but he did not personally traverse all the region embraced in his map and described in his book. He regards the Desplaines and the Illinois as one river. He may properly say therefore that the Illinois river furnishes a communication with Lake Michigan without implying anything definite as to the navigability of the Desplaines, which, as Hutchins uses the terms, constitutes the upper portion of the Illinois. In describing the Illinois country he refers to Kennedy's Journal for a further account of it. Page 45, footnote:

"See the annexed Plan of the villages in the Illinois country, &c., and see appendix No. 1 for a farther account thereof."

4028 Turning to Hutchins, page 51, Appendix No. 1, is entitled: "Mr. Patrick Kennedy's Journal of an Expedition undertaken by himself and several Coureurs de Bois in the year 1773,—from Kaskaskias Village in the Illinois country, to the head waters of the Illinois river"; and a foot-

note which reads: "N. B. This Journal was never printed before." This is from the edition of 1778. I call special attention to the portion of the title which reads: "Mr. Patrick Kennedy's Journal of an Expedition," * * * "to the head waters of the Illinois river." Yet it appears from 4029 the journal that Kennedy actually ascended to a point only 15 miles below the Desplaines, and the last sixty miles of this journey was made by land on account of the river being too shallow for their boat, which drew three feet of water. Taken alone, Hutchins' statement on page 42, upon which McLaughlin has based his comment, may be inferred to imply navigability of the Illinois to the Chicago portage. Such an interpretation is not necessary. The historian will naturally construe the passage by Kennedy's Journal, to which reference is made by the author, which makes it plain that the upper Desplaines and a considerable portion of the Illinois below the Desplaines could not be passed over by Kennedy in his boat at the time he undertook so to do. It is a fundamental of historical criticism that a statement is to be interpreted or explained in accordance with its context. Kennedy's Journal is properly a part of the context of this statement of Hutchins. I conclude, therefore, that 4030 Hutchins makes a general statement which by inference may possibly be taken to imply the navigability of the Desplaines, which inference if taken is not borne out by Kennedy's Journal, to which the reader is referred for more detailed information.

Motion to strike out answer of witness, "Which makes it plain that the upper portion," etc.

The WITNESS (continuing): I have examined Illinois in 1837, and the quotation therefrom referred to by Alvord in his direct, at transcript page 345 (Abst., 161) from page 36 of the work, particularly the portion which reads:

"About forty-two miles above the mouth of this stream is a swamp connecting it with the Chicago river, through which boats of some burden have often been navigated into Lake Michigan.

4031 This route was used by the traders as a medium of communication between the great lakes and the Mississippi, from the first discovery of the country by Europeans;—this circumstance first suggested the idea of an artificial connexion by means of a canal at this point."

This book is a compilation, based in part at least upon dubious sources of information. Its contents do not constitute

source material except in the sense of being gathered by one nearer the time than we are to-day, and to be regarded as suggestive, rather than constituting a final authority. We do not know author's name. Have no guarantee except from the volume itself and in the preface, of the care with 4032 which the work was done. The statements therein as to how the work was done leads one to be skeptical as to the validity of the contents of the volume. An excerpt bearing upon this point appears in the record, at transcript page 345 (Abst., 161), testimony of Clarence W. Alvord. I 4034 call particular attention to the portion beginning, "The bulk of the information," etc., and on to the end. The portion of Illinois in 1837, page 37, is referred to in the title page as follows: "To which are annexed the letters from a Rambler in the West." These letters are introduced by the compiler of the volume in the following words (reading):

"The six following letters from the pen of a talented young Philadelphian, a correspondent of the editor of the Pennsylvania Inquirer and Daily Courier, appeared in the columns of that gazette in the spring of the pres- 4035 ent year, under the title of 'A Rambler in the West.' They are beautifully written, and possess more than ordinary interest for those anxious to acquire information relative to the Western Country, more particularly the State of Illinois."

This portion of this volume is source material, and my comment on the volume needs modification to this extent. The second of these letters, entitled Number 2, dated Peru, Illinois, February 4, 1837 reads (reading):

"Peru is situated on the Illinois river, at the head of river navigation, and is the point of termination of the Illinois and Michigan canal."

My attention is directed to "A Topographical Description of the Western Territory of North America, by Gilbert Imlay," which has been referred to by Alvord at transcript page 207 (Abst., 88), particularly passage, transcript pages 208-209 (Abst., 88-89), beginning with the words: "I have mentioned that it is about 230 from the mouth of the Ohio up the Mississippi to the mouth of the Missouri 4036 and about 20 from thence to Illinois, which is navigable for batteaux to its source. From thence, there is a portage only of two miles to Chicago, which is also navigable for batteaux to its entrance into Lake Michigan, which is a distance of 16 miles," and so forth. Imlay's

book is a series of letters to a friend in England, describing Kentucky. His friend issued them in a book, the immediate occasion being the interest in the west aroused by St. Clair's defeat. Imlay gives us an account, pages 44 to 47, of 4037 the Illinois country, naming as authorities Charlevoix, Carver and Hutchins and saying that their writings have been generally read so as to disseminate a knowledge of this country even in its wild state. (Reading):

"Great part of it has been described by Charlevoix, Hutchins and Carver. Charlevoix seems to have gone rapidly from Detroit by water the greatest part of the way to New Orleans; Hutchins to have done nearly the same from Pittsburg, down the Ohio to the Mississippi and up that river to the Illinois; so up that, and from thence to Detroit. He has given a tolerably good account of the Illinois country. Carver confined his travels and remarks to the lakes, the upper part of the Mississippi, particularly the river St. Pierre, and the northwestern branch of that river, and to the customs and manners of the Indian nations. These authors have all considerable merit. They have written so agreeably, that their books have been generally read; which has tended to disseminate a knowledge of this country in a savage state."

4038 The book states that Hutchins went down the Ohio from Pittsburg, up the Mississippi, up the Illinois, and thence to Detroit. Imlay expressly states on page 45 that he has not been up the Illinois and begs the reader to travel with Hutchins, saying that he has been told that Hutchins' observations are considerably accurate. Imlay further says (page 47) that he has gone cursorily over the western country, meaning that he had described it cursorily, but he has "purposely avoided taking any notice of those parts which are so little known, and of which I could say nothing but from the information of hunters and savages, which has been industriously collected and published by Carver, Jefferson, and others."

On page 71, it states that the Illinois is navigable for batteaux to its source; that thence there is a portage of only two miles to Chicago, which is navigable for batteaux to its entrance from Lake Michigan, which is a distance of sixteen miles.

My conclusions based on Imlay generally, and in part on these portions I have called attention to, are that Imlay had never been there. He relied on Hutchins for his account,

and I have considered Hutchins. Hutchins so far as can
4039 be learned from his book had not been in this particular
portion of the country, although there is no positive
statement to the effect that he had never been. Imlay's state-
ment as to the length of the Chicago river shows his informa-
tion is incorrect as to the geography of the region, and tends
to invalidate his assertions concerning the nature of the Illi-
nois, which he regards as continuing in what we to-day term
the Desplaines. I am familiar with the Journals of Marquette,
appearing in the volume of the Jesuit Relations, and the ex-
cerpts referred to by Alvord, transcript pages 54, 55, 62,
63 and 64. (Abst., 23, 24, 26, 27). My attention
4040 is directed to the following portions of Marquette's
Journal, the return on his first voyage, and to
the Illinois and Desplaines. (Page 52.) Page 54, con-
cerning his map showing the rivers and lakes by
which one navigates across Canada and North America for
more than 1200 leagues. Page 59, in regard to the passage
by way of Lake Michigan and the Illinois river to the Gulf.
Page 62, referring to Marquette's second expedition. Page
63, referring to an account of his leaving his winter camp at
Chicago. I agree in general with what Alvord has said as
to the historical standing of Marquette's Journal of his first
expedition. Joliet lost all his records on the return from
this expedition, so the map must have been drawn from
4041 memory. Joliet has reported by those who have left us
the record which we have of his report of the expedi-
tion, manifested a very enthusiastic temperament, which leads
him to exaggerate the ease of his proposed new water route
to the Gulf. Frontenac and Dablon based their reports on
what Joliet had told them; made one in the summer and the
other in the fall of 1674. Dablon, according to the study of
Justin Winsor on this subject, seemed to appreciate the situ-
ation more intelligently than Frontenac did. Dablon said
that a bark could go from Lake Erie to the Gulf if a canal
should be made at Chicago. Frontenac said that one could
go from the St. Lawrence to the Gulf of Mexico with only a
portage of half a league at Niagara, and urged a settlement
be made at Niagara and that a vessel be built on Lake
4042 Erie which he thought would go to the Gulf in ten days.
I now read from "Cartier to Frontenac" * * *. (Read-
ing the title page):

"Geographical Discovery in the interior of North
America in its Historical relations. 1534-1700. With

full cartographical illustrations from contemporary sources, by Justin Winsor. Boston and New York. Houghton, Mifflin and Company. The Riverside Press, Cambridge, 1894.

(Page 247): It seems clear that Frontenac had not quite understood what Joliet had communicated, or that explorer's enthusiasm had spirited away the obstructions at Chicago."

4043 I will observe that concerning the authority of Frontenac and especially Dablon's reports of August and November, 1674, both are based on conversations with Joliet, whose records have been lost.

4044 Alvord erred in describing the report which he introduced, as Frontenac's. He actually introduced Dablon's report on which I base this comment. Joliet was filled with enthusiasm for his colonizing scheme which led him into unwarranted statements. To illustrate, on page 107, volume 59, of the Jesuit Relations, his statement that if the settler in the Illinois country had no oxen, he could use those of this country, apparently referring to the buffalo. And again, with the wool of this oxen he could make clothing much finer than most of that which we bring from France. I am not aware that settlers used the buffalo as a beast of burden or that they made fine clothing from the wool. Joliet's description of the water route seems to have been equally overcolored, for his canal of half a league of prairie proved, in actual
4045 building to extend upwards of 100 miles, and to cost several millions of dollars. As throwing further light upon the state of mind of the early French explorers, particularly Joliet, I call attention to Schoolcraft's Travels in the Central Portions of the Mississippi Valley, edition 1825, page 322, containing the description of the conclusion of Schoolcraft's journey by way of the Illinois river, and then by horseback on to Chicago (reading):

"Nothing strikes the observer, in riding over these plains, with more force than the paucity of the present Indian population, wheer the old missionaries represent them to have existed in 'hordes innumerable.'

And we have been sometimes tempted to conclude that these zealous fathers, influenced by secular considerations may have been induced to exaggerate the numbers, or have taken little pains to be satisfied of the truth. 'To count,' says the author of the Rambler, 'is a modern
4046 practice, the ancient method was to guess; and where

numbers are guessed they are always magnified.' To increase the importance of the labour, by multiplying its objects, is not a practice peculiar to the era we have mentioned."

Reading under date of August 13, 1821, page 323 (reading):

4047 "To avoid, as much as possible, the great heats of noon, we left our camp at a very early hour. Our track lay over the same pleasing succession of prairies and groves, which have characterized the whole country from Peoria lake. We are no longer surprised at the extravagant praises bestowed upon the picturesque and pastoral features of this country, by Tonti and other early writers; though what is so lavishly said by the same class of writers respecting the positive advantages of the country in a statistical point of view, is to be received with proper abatements. We must allow something for the national warmth of expression of the French, and deduct a little for inaccuracy or carelessness of observation. To their enchanted eyes, every grove was a paradise animated with birds of the most rare and beautiful plumage, and every prairie a garden filled with the most odoriferous flowers. The forests abounded with delicious nuts and fruits, the river with fish, and every part of the country was filled with the deer, elk, and buffalo. This was all measurably true, and they could add, with perfect consistency, that in every native they met a friend. Such an aspect of things, must naturally have inspired them with sentiments of delight, while their enterprise was praised, their commerce flourished, and their missionaries triumphed.

We do not think they drew a faithful picture of the country; we mean of its more important features, but we think they seldom erred less."

Since Alvord is wrong in his identification of Dablon's report, all his testimony on transcript pages 57 to 59 inclusive (Abst., 24, 25) has no application. But, he says on transcript, page 58, that Frontenac's interest in routes of trade should be checked up by Winsor's remark in the volume Cartier to Frontenac, which I have quoted, as to Frontenac's lack of intelligent appreciation of the situation.

I now refer to Marquette's Journal of his First Voyage of 1673, Thwaites' translation, 59 Jesuit Relations, page 87.

Marquette and Joliet had the lightest equipment possible on this expedition, page 91 (reading):

"We were not long in preparing all our Equipment, although we were about to Begin a voyage, the duration of which we could not foresee. Indian Corn, with some smoked meat, constituted all our provisions; with these we Embarked—Monsieur Jolliyet and myself, with 5 men—in 2 Bark Canoes, fully resolved to do and suffer everything for so glorious an Undertaking."

Further light is thrown on the nature of their equipment by the passage, page 109 (reading):

4049 "From time to time, we came upon monstrous fish, one of which struck our canoe with such violence that I Thought that it was a great tree, about to break the Canoe to pieces."

Here accurs Thwaites' footnote (reading):

"This was probably the catfish of the Mississippi (*Solurus Mississippiensis*). They sometimes grow enormously large, and strike with great force any object that comes in their way.' B. F. French's note, *Disc. of Miss. Valley*, p. 17."

A further passage on the equipment is at page 137 (reading):

"We take leave of our Illinois at the end of June, about three o'clock in the afternoon. We embark in the sight of all the people, who admire our little Canoes, for they have never seen any like them."

A further citation refers to the hopes which Marquette expresses of being able to follow up what we call the Missouri river and thence by portages to pass to the Western Sea (reading page 143):

4050 "From them I have learned that, by ascending this river for 5 or 6 days, one reaches a fine prairie 20 or 30 Leagues Long. This must be crossed in a Northwest-erly direction, and it terminates at another small river, on which one may embark; for it is not very difficult to transport Canoes through so fine a country as that prairie."

If this remark be true, and evidently Marquette would be better qualified to pass on its validity than the historian of today, for he was better acquainted with the character of the canoes which he himself and Joliet were using on this expedition, it would be equally easy to transport canoes from the Chicago river to the Illinois river, I believe a somewhat less

distance through a country probably equally as level as that in the upper region of the Missouri to which Marquette here refers.

I conclude that the document proves nothing as to the nature or the use which may be made of the Desplaines river, 4051 and that this observation may be applied, so far as the circumstances justify in each individual case, to later voyages or other voyages in bark canoes made by the early French explorers, or by others who used this means of transportation.

I have examined Joutel's Journal of La Salle's last voyage, and the passages referred to by Alvord, at transcript, pages 102, 103 and 105 (Abst., 43-45), as throwing light on the use of this route, the particular portion beginning at transcript, page 104. Joutel became a leader of La Salle's party after the murder of La Salle, came up the Mississippi river 4052 and Illinois by way of Chicago and Canada. It appears that the party on this expedition was met at Fort Lewis in December by two men who had come down from Montreal. These men came to Fort Lewis, which was the fort on the site of Starved Rock, which had been established by La Salle at a prior date, to notify Tonty that they had left behind at Chicago three canoes laden with merchandise and other things, and giving as their reasons for this that there was too little water in the river and what there was, was frozen.

(See transcript, page 103, Abst., 44.) Tonty procured 4053 40 Indians to come to Chicago and carry the merchandise back to the fort. The Journal shows that in December it was found impossible or impracticable for the men from Montreal in charge of these canoes which were destined for Fort Lewis, or at least for a point that far down the Illinois, to bring them any farther than Chicago, or down the Desplaines. The Journal shows that a party of men with canoes passed from Fort Lewis to Chicago in 1688, the period occupied in the journal being from March 21 to 29; 8 or possibly 9 days, a distance of practically 100 miles. It further shows they made this passage with toil and difficulty. They had often to go into the water and drag the canoe along 4054 and that some of the party at least suffered much from this circumstance. It is evident from the account and what we know from other sources concerning the subject that this was in time of spring flood on the Desplaines. Marquette in the accounts of the journal of the second voyage, 59 Jesuit Relations, 187, shows that the spring flood in that year began

at Chicago on the 25th of March; that he was flooded out of his winter camp in the course of the next few days. On March 31, he began his journey from Chicago down the Desplaines, the water was 12 feet higher than it had been at the time he was there on his first expedition, 18 months before.

My conclusion as to the whole narrative is that the account does not enable one to draw any conclusion whatever as to the normal condition of the Desplaines river, and makes it perfectly clear that the stream was subject to great fluctuation as between different seasons and periods of the year.

4055 I have made an analysis of John Kinzie's letter, July 15, 1815, to Cass, referred to by Alvord, at transcript, page 230 (Abst., 100), and referred to by Professor McLaughlin at transcript, page 769 (Abst., 320), wherein he speaks of it as a source of the highest quality, next to an absolute survival. The letter, page 230, is written to Cass, as a plea for the establishment of a garrison at Chicago and was used by him in a report to the Government of similar purport. Kinzie had lived upwards of twenty years in the country at the south end of Lake Michigan, and was acquainted with its importance. The executive of the United States was anxious to establish peaceful relations with the Indians. The most hostile
4056 were Chippeways, Pottowatomies, Ottawas and others living between Mackinac and the south end of Lake Michigan, but who were forced to migrate at certain seasons to the waters of the Chicago, Fox and Illinois rivers. The intercourse of these tribes with the traders of the southwestern company who were hostile with the American traders accounts for their hostility. The importance of establishing a military post near their place of general rendezvous is obvious. A garrison was necessary in order to keep order and restrain the British traders, whose interference will ever keep them hostile to the United States. As the navigation of those waters will, in a few years, be important to the United States, and as at present boats of several tons can pass from Lake Michigan into the Mississippi river, there being only 4½ feet difference in the elevation of the two waters, it would be politic to secure the friendship of the hostile Indians. It is pointed out that Chicago is all important to the Illi-
4057 nois country as it is the key of commerce and has command of the trade of a vast territory. McLaughlin considers this as a source of highest quality. I observe that as he apparently concluded, Kinzie undoubtedly knew the condi-

tion of the region of which he spoke, but McLaughlin failed to take into account all considerations which might influence Kinzie's statements on those facts or conditions, and fails to show that this is a conscious source, whether Kinzie may have had a prejudice or motive for misrepresenting the actual facts. Most of what historians have said of the character of John Kinzie is favorable. On the other hand, Kinzie
4058 was a man of violent temper. His only means of livelihood was the trade at Fort Dearborn prior to the massacre of 1812, which livelihood was wiped out by the massacre and war. Obviously, he would have an interest in reviving the trading position he held at Fort Dearborn prior thereto, and he points out that to do this, a garrison at Chicago is essential. There is evidence in existence worthy of serious consideration tending to indicate that Kinzie killed his rival, John Lalime, in a business quarrel in a way suggestive of murder. I don't know, I say, that it is susceptible of proof. Though a United States citizen, he entered the British service during the war of 1812 and while so engaged, his associates believed he proved a traitor to the English, and they sought to meet out punishment upon him. In this year, 1815,
4059 in which this letter is written, Kinzie was still in the British service.

4060 I have examined "LaHontan's Voyages to North America" and that portion which is referred to in the cross-examination of complainant's witnesses at transcript, page 500 (Abst., 218) (reading):

"The 29th I arrived at the Village of the Illinois; and to lessen the drudgery of a great land carriage of twelve great Leagues, ingag'd four hundred Men to transport our Baggage, which they did in the space of four days."

4061 LaHontan's account of the trip to Long river is generally agreed by historians not to be valid or authentic. However, except for this 16th chapter of LaHontan's, historians give him high rating for keen observation and veracity. I referred to Thwaites' introduction to LaHontan's voyages to North America, page XXXVII, Volume 1 (reading):

"A participant in some of the most stirring campaigns in the brilliant epoch of Frontenac's government, LaHontan presents to us admirable reports of these events. We have also in his pages first-hand accounts of the political institutions of the colony—its officials, courts, and local government, combined with incisive characteriza-

tions of the respective governors, intendants, and official noblesse. The strutting functionary, the zealous Jesuit who balks at no hazards, the gay soldier, the hardy habitant, the roving coureur de bois, and the naked savage, all stand out in bold relief upon his pages. Even the
4062 birds and animals, the plants, and the minerals of this strange land do not escape our observer's eye. Thus not only in history, but topography, geography, ethnology, and natural history, all of it the record of personal knowledge, LaHontan's work stands as one of the important sources for the intimate study of New France.

The frequent neglect of Lahontan by scientific and historical students, has not been justified by the lack of material in his pages. As already intimated, it is in large measure due to the spurious character of the alleged discovery of the River Long, described in the sixteenth Letter. Investigators have, from this one chapter, rejected all."

The motive which was probably back of the fabrication of Chapter 16 would naturally lead him to stick to the geographical truth as he understood it. He wished his account of his new explorations to gain credence. It was clearly to his advantage to describe the portions of the routes already known to the whites as accurately as practicable, and the account displays knowledge of the geography of the route from Mackinac through Green Bay and up the Fox river.

Assuming then that he never made the Long river trip, and this I understand is in accord with the general conviction of historians, but that he only pretended to have
4063 made it, he was intimate with Duluth, Tonty, Perrott, and others, and probably heard from them accounts of the geography of those regions they were familiar with; he may have drawn his account of Chicago and vicinity from Tonty, therefore, I conclude his description of this vicinity may be taken as an indication of the belief on La Hontan's part, based on information which may have been gained as I have pointed out, that the Chicago portage necessitated a great land carriage. Thwaites' footnote, La Hontan, Volume 1, page 178, dealing with the Wisconsin river says (reading):

"Lahontan's description, although brief, is not inexact, and appears to be that of one who had seen the alternating cliffs and meadows which border the Wisconsin, one of the most beautiful of western streams. See chapters on the Fox-Wisconsin waterway in

Thwaites' *Down Historic Waterways* (Chicago, new ed. 1903). Ed."

4064 This description of the Fox to which the note alludes appears in letter 16 of Lahontan's work, the trip to the Long river. My reference to his knowledge of Duluth, Tonty, Perrott, and others is based on an extract from Roy, in the Royal Society proceedings of Canada for 1894, Volume 12, page 143, heretofore appearing in the record. Thwaites represents Lahontan as being a worthy and important source, aside from the Long river expedition story.

4065 Other historians of repute and standing, Parkman and Winsor, cite LaHontan as authority for their statements. I have examined the report of James Logan from Hurlbut's *Chicago Antiquities*, page 129, which reads (reading):

"From Lake Huron they pass by the Strait of Michil-makinac four leagues, being two in breadth, and of a great depth, to the Lake Illinois; thence one hundred and fifty leagues on the lake to Fort Miami, situated at the mouth of the River Chicagou. This fort is not regularly garrisoned. From hence came those Indians of the same name, viz., Miami, who are settled on the forementioned river" (Miami, now Maumee) "that runs into Erie. Up the River Chicagou they sail but three leagues to a portage of a quarter of a league; they then enter a very small lake of about a mile, and have another very small portage; and again of another of two miles, to the river of Illinois; thence down the same one hundred and thirty leagues to the Mechasipi."

4066 Also copy of Logan's statement found in 19 Michigan, Pioneer Historical Collections, page 5. According to complainant's witnesses, Logan's description is a rough draft of his report prepared for Governor Keith of Pennsylvania in preparing a memorial to the British Board of Trade. Alvord testified Keith and Logan were regarded as men that were very familiar with colonial affairs. Keith was appointed Governor in 1717. The date of the report is 1718. It seems a fair inference, therefore, that Keith had little opportunity or time to acquire familiarity with the interior, particularly the region around the foot of Lake Michi-

4067 gan. Logan had been Penn's chief representative in Pennsylvania. It has not been shown that he had ever been in Illinois or this portion of the country at the foot of Lake Michigan. I would say it is very improbable he ever had been. At this time the seaboard English colonies

had only hazy ideas of the geography of the interior of the present United States, even for example, of the upper Ohio valley. The report indicates that Logan was not talking about modern Chicago, or his information concerning it was so inexact as to lead him to place a fort where none existed.

The Board of Trade report, 19 Michigan Pioneer and Historical Collections, page 5, is a mere repetition of Logan's statement to Keith. Alvord said, transcript page 131 (Abst., 56) that it would be regarded as the report of a body whose purpose it was to investigate, and as giving information which the Board at that time possessed. This is a very carefully guarded statement, and says very little; would not take
4068 issue with it as it stands, but merely observe its significance. Englishmen generally were very ill-informed concerning American conditions in this period, and my statement has particular force with reference to conditions in the interior of the continent, a region belonging to another nation than Great Britain. The inclusion of Logan's report in the Board of Trade report adds nothing to its historical repute. Its only force is as a statement by Logan. My statement that Logan placed a fort here which did not exist, is based on 16 Wisconsin Historical Collections, page 331, report of Ramezay, appearing at transcript, pages 123 and 124 (Abst., 53), dated November, 1715, which urges the establishment of a fort at Chicago. If a fort already existed at Chi-
4069 cago, November, 1715, this recommendation would not be made.

I have examined Long's report, which is an extract from that report printed in the 16th Congress, Document 17, submitted by Calhoun, December 28, 1819, and also in State's Papers Miscellaneous, vol. 2, and the portions thereof which have been read into the record. I also procured and
4070 examined the entire report as submitted by Major Long as published in the National Register for March 29th, 1817, being volume 3, the report being found on pages 193 to 198.

Q. Will you give your analysis of that report and your conclusions upon that portion of it which was read into the record by the government?

Objection, the question assumes that the full report was not presented in the record.

A. The full report as Secretary Calhoun presented is to Congress was copied in the record. Long's full report made

to the War Department was not copied into the record. The report is dated March 4th, 1817.

COUNSEL FOR COMPLAINANT. We ask that the additional matter be submitted in the record if he is going to comment upon it.

4071 The WITNESS. Long submits it with his plans for the country through which he travelled, which with the report are grounded principally upon his own observations. I am giving a synopsis of the report. He says, Volume 3, National Register, page 193 (reading):

"In many respects, however, I have had recourse to intelligence collected transiently from persons who have traversed those parts of the country which it was not in my power to visit.

I take the liberty of introducing, under different heads, the several subjects proper to be comprehended in the
4072 report; in relation to which I shall only be able to offer general ideas, as the time employed in the reconnoiter has been too limited to admit of a particular and minute detail."

The country Long investigated dealt with that lying between the Ohio and the Mississippi, the Rock and Milwaukee rivers, Lake Michigan and Michigan Territory, and on the east side of the State of Ohio. He names principal rivers; points out that the Ohio, Mississippi and Illinois, with constituent streams and the Chicago, are most important from a civil and military viewpoint, the reason being, page 193 (reading):

"Being the channels through which trade and all kinds of intercourse will be kept up, hereafter, between distant sections of the Union. These may be considered the cords which will unite the northern interests of the country, and will eventually become the most important links in the grand chain that surrounds the whole."

He says the present waterway from the Desplaines to the Chicago, page 195 (reading):

"... needs but little more excavation to render it sufficiently capacious for all the purposes of a canal; it may be supplied with water at all times of the year
4073 by constructing a dam of moderate height across the Desplaines, which would give the water of that river a sufficient elevation to supply a canal extending from one river to the other."

He had in mind a canal between the Chicago and the Des-

plaines. Points out, Desplaines and Illinois may be rendered navigable by construction of sluices. This can be done by clearing away loose stones from the banks 2 or 3 feet high on each side of the sluice. There are but few places where this sort of work will be necessary, probably not over two miles in all. Thus, a water combination between the Illinois and Lake Michigan may be kept open at all times, sufficient to answer all the purposes for which a canal will be wanted for many years to come.

Long did not personally visit all the region described in the report. He says in the early part of the report:

"In many respects I had recourse to intelligence collected transiently from persons who have traversed those parts of the country which it was not in my power to visit."

And he says he can report "only generally as the time employed in the investigation was too limited to go into
4074 detail." I think, however, it is probable from what follows, that Long himself did come to Chicago. His report is dated March 4th, 1817. The site of Fort Dearborn was re-occupied by U. S. troops, July 4th, 1816. It seems probable that such an investigation would not be undertaken in the winter time, and it is likely that Long having made his investigation would not unnecessarily delay making his report upon it. I infer he made his tour in the spring of 1817, therefore saw the Chicago-Desplaines route when the water would be higher than at other seasons of the year. Long's report is squarely in favor of the canal, saying that a navigable connection could be opened between Lake Michigan and the Illinois river, giving the details. I conclude Long's observation was not thoroughgoing and that he was misled as
4075 to his conclusions by the fact that he was here in the spring time, and had no opportunity to observe the Desplaines and Illinois at other seasons of the year. He believes a short canal from Chicago to the Desplaines only is needed; that little need be done to make the communication already there adequate for all purposes. His conclusions are erroneous in several respects. That little need be done to render the Desplaines navigable for small boats, thus keeping open the water communication between Lake Michigan and the Illinois at all times and adequate for years to come. As to my observation that a short canal from Chicago to the Desplaines only is needed, I have in mind the experience of Schoolcraft on his journey up the Illinois in 1821, the statements that are

made in the report of Graham and Philips, and the statement of Hubbard, page 39, Hamilton's Hubbard. I say
4076 the statement that little need be done to render the Desplaines navigable for small boats, etc., is erroneous among other things because of what Schoolcraft records of his experiences in his journey up the Illinois to Chicago in 1821, the report of Graham and Philips and what Hubbard said as to the Desplaines sometimes being so dry that it could be crossed without wetting the sole of the feet. To what I said bearing upon the first error, I would add the experience of traders with whom Schoolcraft talked on that expedition, 1821; a letter of Tousey to Schoolcraft and the experience of those who later built the Illinois and Michigan canal.

4077 As bearing on the correctness of Long's statement, Charlevoix says the river is only a brook in this upper portion and that he was informed that in this season of the year, September, it would not float a canoe. St. Cosme states that except in spring a portage must always be made in the lower portion of the river since there was not water enough in the river to permit the passage of the boats.

La Salle's statement discussing Joliet's report as to the practicability of water communication between Lake Michigan and the Mississippi and the Gulf of Mexico, points out that this might be possible for a short time in the spring, but for only fifteen or twenty days. It is my impression this discussion applied particularly to somewhat larger boats than ordinary canoes.

4079 If we assume that La Salle did refer to such boats as Long referred to when La Salle said that for only 15 or 20 days there was water during the year, it would tend to invalidate Major Long's statement.

4080 Counsel for Complainant thereupon read into the record an excerpt from Long's Report which the witness had commented upon. 3 National Register, 1817, page 196 (reading):

"At Chicago, situated on the south west part of Lake Michigan, is Fort Dearborn, destroyed by the Indians in August, 1812, and rebuilt in part by the troops now stationed there under the command of Capt. Bradley. Two companies of soldiers arrived at this place on the 4th of July last, and, under the direction of Capt. Bradley, commenced the erection of a pallisade work and quarters large enough for their reception. The works are in a state of forwardness that does much credit to

their industry, and will probably be completed in the course of the next season.

Fort Dearborn is situated upon a point of land formed by a bend in Chicago river, and is about 800 yards distant from the mouth of the river. Directly opposite to the present site of the fort, on the other side of the river, is a position better adapted to the defence of the place,
4081 as it would afford a more complete command of the entrance into the river, and at the same time command the anchorage to a very considerable extent. This position is upon a point of land lying between the river and lake, and ought to be fortified in a manner calculated to resist any naval force that may be brought against it."

Recurring to my statement that in the year of 1815, in which the letter by Kinzie to Cass was written, that Kinzie was still in the British service, I call attention to 16 Michigan Pioneer Historical Collections, pages 327 to 341. The document entitled "Court of Inquiry," which is the record of the proceedings of a court of inquiry held by order of "His Excellency, Major General Sir S. P. Robinson, K. C. B., commanding in Upper Canada & Administering the Government thereof. Fort Drummond 10 Oct. 1815." It is one of the documents
4082 gathered evidently from the British Archives. It names the members of the Court and states (reading):

"The Court being assembled proceeded to the investigation of the following charges preferred by the Government of the United States against Lt. Joseph Cadot of His Majesty's Indian Department.

1st. For having offered money to the Indians for the
4083 scalps of two persons of the name of Chadronet & Kinzie, then residing in the Territory of the United States.

2nd. For having told the Indians that the Fortifications at Michillimackinac were all in a situation to be blown up, if at any time the Americans should go there & that the peace was but an artifice.

Previous to the commencing the Proceedings Lt. Col. McDonall thought it right to state to the court, his motives for sending Lt. Cadot on the duty alluded to, and also to state the verbal instructions which were given to him—Lt. Col. McDonall being desirous to send a supply of Presents to the Indians of the Grand River on Lake Michigan, in Nov: 1814 availed himself of an opportunity presented by Mr. Coursolle (a Trader) setting out for that place with a supply of goods for the Indians

of the neighborhood. Aware that they were divided in opinion as to the attachment to the two governments, Lieut. Cadot was directed to assemble the Indians he could depend upon, for their mutual protection. This was the more necessary from the circumstances of there being frequently in that part of the country, two notorious characters, the one (Chadronet) a murderer and both guilty of treason to their country."

The other of these two notorious characters is John Kinzie (reading):

4084 "These men had likewise done much mischief among the Indians. Even when employed in the British service, under Mr. Dickson at Detroit, in 1815, they were industriously exerting themselves to seduce them from our alliance, but their treachery being detected they were sent, in irons, to Amherstburg. Kinzie was forwarded in the same state to Quebec but Chadronet (then an interpreter in His Majesty's Indian Dept) contrived to make his escape to the Americans."

As the basis of my statement that Kinzie probably killed his business rival Lalime, I might refer to any one of a score or a hundred histories that refer to this period of Chicago history.

4085 I refer particularly to Andreas' History of Chicago, volume 1, page 105, which gives an account of the Lalime homicide. There is no question on the part of anyone who pretends to be familiar with this period, that Lalime was killed by Kinzie, the question being as to the amount of culpability in Kinzie in the affair. My authority for that is "Chicago from 1803 to 1812, by General James Grant Wilson, page 4 (reading):

"Cooper who succeeded Dr. William C. Smith, First Surgeon of Fort Dearborn, was, in 1810, the bearer of a challenge from Lieutenant Hamilton to John Kinzie the Indian trader, who declined to accept it, but fell to abusing and cursing the First Lieutenant, which occasioned a violent quarrel between the bearer of the challenge and Kinzie. From that day Cooper held no further intercourse with the Indian trader. Half a century
4086 later, after describing Kinzie as a man of ungovernable temper, Cooper charged him with the murder of Lalime, the interpreter, adding that he frequently had bitter quarrels with people. Gurdon S. Hubbard, who went to Chicago in 1818, gave me a different account

of the unfortunate affair, representing that the two men had a bitter altercation, that Lalime who was armed with a pistol attacked Kinzie, who in self defense, stabbed the interpreter, thereby causing his death. The Indian trader sought safety in flight, but returned a few weeks later. As he was not arrested by the officers of the garrison, as Kinzie anticipated, and as Lalime was a particular favorite with them, it is fair to assume that Hubbard's version of the occurrence is the correct one."

I observe that this citation points out as we see in Hamilton's Hubbard, that Hubbard came to Chicago for the first time in 1818, six years after the killing of Lalime, and that Hubbard in the Life and the account he has given Wilson, followed the traditional account of the Lalime killing, which will be found set down in various histories of early Chicago. I cite this document, not as showing what Hubbard said or thought about the Lalime affair, but as showing that Dr. Cooper, who was the surgeon here at Fort Dearborn for 3 years, for 50 years after this time believed that Kinzie had murdered Lalime.

I have examined the Haldimand Papers, Brehm to Haldimand, 19 Michigan Pioneer and Historical Collections, page 405, which has been referred to by Alvord, transcript page 171-172 (Abst., 73-74), the particular passage beginning (reading):

"After considering the situation of Major de paister I apprehend he runs more risk from Chicagu by the Illinois River, then Capt. Larnould, as your excellency will have and yet see, what precautions and means Col. Bolton has taken and is still constant sending partys towards Tuscarowas, and Fort Pitt to harass and disturb their proceedings but Clark having reduced Vincennes as early as February may have time to attack de paister by the above mentioned River, if the least preparation has been ordered by him at his leaving the Illinois."

4088 My conclusion is that this letter does not necessarily indicate anything as to the navigation of the Desplaines river. It simply states: "I apprehend he runs more risk from Chicagu by the Illinois river," and indicates nothing as to the means of transportation in view. It may be a fair inference to suppose that it was to be by boat, but any such inference must be controlled by our knowledge of the customary use of the Desplaines if such can be determined. It does not necessarily follow that travel on such an expedition

was to be entirely by boat, perhaps not even at all by boat, as oftentimes in similar expeditions they travelled by land. For example, 10 Michigan Pioneer and Historical Collections, page 569, referring to La Mothe's Plan of an Expedition against the Illinois. The character of the expedition that the writer apprehended risk to Major De Paister from, certainly does not appear.

4089 The illustration deals with the expedition of the British and Indians from Detroit against the Illinois. According to the plan of La Mothe in this document, they were (reading):

"Leaving Detroit with a small army of and some neighboring Indians, Sauntaux, Hurons & Misthey will come by land to St. Josephs a journey of eight or ten days. Then after having taken the Poux Nation, who are settled on this river, they will come to the branch of the Chicagoust & the Quinquiqui to try to get the Indians of the small fort of Milanaquis & another village, who have appeared, till the present to give their services to the Illinois & lately conducted a party to St. Joseph who took the Commandant placed there by Governor Saint Clair."

I now take up the Navigator, referred to in Alvord's direct at transcript page 315 (Abst., 146) and read from the preface immediately following the portion of the preface read by him. (Reading):

"IV. Conscious of the imperfections of the Navigator, we depend much on the goodness of others to detect its errors and point them out to us, in order that they may be corrected in a future edition; observations, also, either of the rivers or of the country through which they run, tending to enhance its value and make it more generally useful, will be thankfully acknowledged."

At transcript page 316 (Abst., 146) Alvord said of this book that:

"This is regarded by historians as the source of information in regard to the west and the navigation of the rivers in the west and has been used as such by historians."

4091 I think it may properly be considered as source material for the matters and period it purports to deal with; on the whole is a reliable compilation which should be used with caution and subject to the tests that a historian usually

employs in using such material. The book deals primarily with the navigation of the Ohio and Mississippi. (Reading):

"It being designedly calculated as an useful and necessary guide to those who navigate or trade on the rivers of which it treats, much pains have been taken to revise, correct and enlarge it throughout; to do this satisfactorily, we have had the assistance of several of the most eminent pilots and navigators, and the use of late manuscript journals of gentlemen of observation, to whom we present our compliments for their aid and politeness."

The editor does not assume personal responsibility for all the statements in the book, deprecates its imperfections
4092 and requests his readers to point out its errors that they may be corrected in future editions. He is not entirely frank and truthful with his readers. In the advertisement of the 1824 edition, the 11th, he stated:

"This edition is considerably enlarged by a more comprehensive description of the principal towns on and adjacent to the rivers; their commerce and manufactures; natural curiosities of the country, &c. The directions for navigating the Mississippi river from the mouth of the Illinois to that of the Ohio river; with the description of the District of Mobile, and geographical notice of Florida, will be found interesting."

This seems to mean that this particular edition has been improved as compared with preceding ones, yet turning to the 7th edition published in 1811, we find the same para-
4093 graph, word for word. It is possible that references to earlier editions than that of 1811 would show that the paragraph was written even earlier than that.

Now, referring to the passage from the Navigator that "between a branch of the Illinois and the Chicago river, which empties into Lake Michigan, there is a portage of two miles; from this portage to the lake is a batteaux navigation of 16 miles," which has been referred to by complainant's witnesses. It does not appear from the Navigator that the editor, Cramer, had ever been over this route. It is probable his statement is based on some other authority, and in support of this conclusion, I cite that he says "the Chicago river is 16 miles in length from the portage to the lake" and this entire statement concerning the portage of two miles and

batteaux navigation from the portage to the lake of 16 miles read as though it were taken from Imlay.

4094 On page 168, 1811 edition, he states: "The Illinois is a fine navigable river, interlocking by a portage of four miles with the Chicagou, a short river which empties into Lake Michigan" and so forth. This does not agree with the statement as to the portage being two miles in length.

Would say in conclusion the Navigator is apparently a reliable source. The author uses information of others, warns reader of possible errors, does not pretend to have been over the route, states that the maps of the Ohio river are based on personal surveys, which by implication may exclude his having been over the other portion of the route described in

the book, states incorrectly the length of Chicago river, 4095 I presume following Imlay in this. One time states length of portage is two miles, another time as four miles. He had moderately correct general secondhand knowledge, in part at least, on the region in question. The book does not decide the question of the navigability of the Desplaines, for while his statement on page 168, would seem to imply as much, we know from other sources that if this statement is so intended, it is untrue for the greater portion of the year.

Whereupon, counsel for complainant read the complete sentence from page 168 of the Navigator as follows (reading):

"The Illinois is a fine navigable river, interlocking by a portage of four miles with the Chicagow, a short river which empties into Lake Michigan, through which channel the great route of the fur and peltry trade is carried on between St. Louis and Michilimackinack, and the other northern lakes."

4096 The WITNESS (continuing). Reading advertisement from navigator, page 1 (reading):

"At a very considerable expense, the maps of the Ohio and Mississippi rivers have been added; and we flatter ourselves with the hope that they will be found as useful to the navigator as they have been troublesome to us. These of the Ohio have been taken from actual surveys. Those of the Mississippi partly from survey and partly from private charts, taken as accurately as the nature of that river will permit.

The account of the Missouri and Columbia rivers, as

traversed by Captains Lewis and Clark, under the direction of the President of the United States, though but a brief view of that interesting voyage, we hope will be found entertaining. It has been collected from the letters of Captain Clark and other publications since the return of the party."

- 4097 Referring to Ogden's Letters from the West, first cited in Alvord's direct, transcript page 280 (Abst., 128) and to the comment thereon by complainant's witnesses, Alvord referring on page 281 to Ogden's speaking of being on the Illinois river, and the further statement on the same page that "In another place he also speaks of being there," and to Thwaites' statement that Ogden travelled down the Ohio to its mouth, would say I have examined Ogden generally and with reference to the extracts heretofore referred to by Alvord and Thwaites. Summarizing Thwaites introduction to Ogden as contained in the preface of Vol. 19 of Early Western Travels where Ogden was reprinted under Thwaites' editorial supervision, he states Ogden was a merchant of Massachusetts, went west in 1821; wrote letters home to his brother on his journey and observations; stay in west lasted 2 years, reached Pittsburg, April, 1821, devotes first letter to description of its prosperity and prospects and neighbor-
- 4098 ing points of interest. In second letter, describes Ohio river journey to Cincinnati and to Louisville; he devotes the 3rd letter to the journey from Louisville to the Mississippi. Reading Thwaites' introduction, page 1 (reading): "These three letters comprise Ogden's account of his personal wayfaring adventures. In preparation for the press he saw fit to add to these communications, written apparently only for family reading, some succinct information on the history, topography, and possibilities of the west, gathered from various sources; this, in order that his letters might prove 'beneficial to those for whom they are particularly designed—the great number of emigrants who are constantly moving to that country.' For our present purpose, the chief interest of the book centers in the early portions—the added data being but a historical and geographical compendium somewhat hastily constructed."

Alvord states that in letter 5 Ogden speaks of being on the Illinois river. I am unable to find any statement to this effect in the letter.

Alvord states that in another place he speaks of going there. The only reference to which this seems to apply occurs on page 60, original edition of Ogden, and reads: After being some time in Illinois I entered Indiana." I will read the opening statement only. The whole passage has been copied with slight alterations from another volume published prior to this time by another traveler through the west. I have shown Alvord would seem to give the impression that Ogden had been in Illinois. Thwaites, in his introduction to Ogden's *Early Western Travels*, volume 19, pages 11 and 12, in the introduction I have summarized says Ogden devotes the first letter to Pittsburg and neighboring points; that in the second he describes the Ohio river journey to Cincinnati, and in the third he describes Cincinnati and Louisville, and the journey thence to the Mississippi. Page 11 (reading):

"These three letters comprise Ogden's account of his personal wayfaring adventures. In preparation for the press he saw fit to add to these communications, written apparently only for family reading, some succinct information on the history, topography, and possibilities of the west, gathered from various sources." * * *

"Page 12: The added data being but a historical and geographical compendium, somewhat hastily constructed."

Thwaites' seems to be in error concerning what Ogden actually did and concerning the credit which ought to be attached to Ogden's work. If Ogden ever travelled down the Ohio to its mouth as he purports to have done in this volume of his, he certainly did not himself take the trouble to write a large part of his reputed observations or description of his journey, but plagiarized much after the manner of the 16th letter of La Hontan, including these first three letters which Thwaites has said comprises an account of his personal adventures or observations from other works which were in existence at the time when this volume of Ogden was published.

Summarizing, I have shown Alvord's statement attributed to letter 5 of Ogden is not to be found in the letter; that the other reference I suppose Alvord referred to has been plagiarized by Ogden from another work. Ogden's work being unworthy of credence, and he probably never was in Illinois or on the Illinois river at all, no more significance

should attach to his account than this, that even though he may have lied about his own journey, he would naturally make his description as correct as practicable to gain credence for his story. At best, this is a second-hand account. I believe a man who does not cite his authorities, whom I am prepared to show plagiarized flagrantly and lies
 4102 openly about the way his work was produced, and about his travels and experiences.

As to the section of letter 5, read by complainant's witnesses, which describes the Illinois and Chicago route, and passage of boat over the route, I assert that this is plagiarized from a pamphlet by Andrew Miller, published in 1818; the pamphlet is entitled "New States and Territories, Or The Ohio, Indiana, Illinois, Michigan, North-Western, Missouri, Louisiana, Mississippi and Alabama in their Real Characters, in 1818, etc., by Andrew Miller."

4103 To determine the sources of this writer, I read from the title page as follows (reading):

"With a few words concerning the impositions and difficulties experienced in moving, settling, &c., collected from the accounts of gentlemen residing in various parts of the different states and territories—from Indian Traders, Indian Agents, Officers of the late Army, Surveyors, Travellers—the different Authors extant on the subject, viz.: M'Kenzie, Shultz, Lewis and
 4104 Clark, Pike, Carver, Emigrant's Directory, Ohio Gazetteer, and Personal Observation."

Since Ogden's account is plagiarized from this it will appear that no credit whatever can be given it as Miller does not even pretend to do more than make a compilation from the numerous sources of information he has indicated, and which have just been read.

4105 Have gone through Ogden's work and computed the portion I am able to identify as plagiarized. Have not counted every word or line but based my estimate on number of lines on the page in the edition of Ogden and the number of lines on certain pages that have been plagiarized, and so carried out my calculation. In the first three letters which Thwaites regards as narratives of personal observations, there are approximately 25 pages of matter. I call attention to this which Thwaites says comprises narrative of Ogden's personal adventures and observations, approximately
 4106 14 pages I have identified as plagiarized. For the rest, there is a total of 94 pages in the book, not deducting

fractional pages for chapter beginnings, etc. Of these pages, 12 are devoted to a discussion of La Salle and Hennepin which it seems a fair inference is taken from someone's else, though I have not identified the sources. In this last section, I have divided the book as Thwaites first divided it. 12 pages Ogden acknowledges were quoted from another authority. 21 1/2 more consist of a floral calendar of Ohio, which he states had been furnished by a local observer, which leaves 66 1/2 pages ostensibly written by Ogden. I have identified what amounts to 33 1/2 pages; approximately 1/2 is plagiarized from other works. To summarize, of the first three letters,

25 pages, almost 2/3, or 14 pages and a fraction I have 4107 identified as plagiarized, and of the remainder, 33 1/2 out of 66 1/2 are plagiarized from other works, leaving out the possibility of still further plagiarisms from still other works which I have not been able to identify. Having found so much plagiarized, it is not safe to assume that the rest is original.

4108 Ogden was a very clever plagiarizer. He takes these other books, cuts them all to pieces, brings in a sentence at one time and another sentence or a paragraph or two or three at another point; turns them all around.

(The respective passages referred to by the witness 4109 from Miller and Ogden are as follows):

(Miller.)

"Illinois Territory.

This territory lies west of Indiana and was formerly included in it. It is 350 m. n. and s. and on an average 200 m. e. and w. containing 35,000 white inhabitants and 5,000 Indians. Its latitude on the north is the same as Ohio and Indiana 41 degrees 50 minutes. On the south it has 37 degrees. The Ohio river separates it from Kentucky on the south, the Mississippi from the Missouri territory on the west, a line parallel with the south end of Lake Michigan from the

(Ogden.)

"The State of Illinois lies west of Indiana, and was formerly included in it. This state is three hundred and fifty miles from north to south, and on an average two hundred from east to west; containing about forty thousand white inhabitants, and between four and five thousand Indians. Its latitude on the north is the same with that of Ohio and Indiana, forty-one degrees fifty minutes. On the south it has thirty-seven degrees. The Ohio separates this state from Kentucky, on the south;

N. W. Territory on the north, the Wabash for 240 m. from its mouth from Indiana on the east. This territory so nearly resembles Indiana in soil, climate, productions, and most other things that a slight description will suffice.

Rivers and Streams. To particularize all the rivers and creeks would be tedious and unprofitable. I shall barely mention the most important,—The *Illinois* is the largest that is peculiar to this territory. This is a beautiful river rising near the south end of Lake Michigan. Its head branches are called Plein and Theakaki or Kankakee. The Plein is navigable within two miles of Chicago river of Lake Michigan and boats are said to have passed over loaded in high water from one to the other, the distance between being a marsh which in high floods is perfectly inundated. The *Illinois* runs in a s. w. direction about 400 m. and empties into the Mississippi by a mouth 80 rods wide 200 m. above the mouth of the Ohio and 20 above that of the Missouri. The country through which it passes is said to be equal to any other in the west. It receives a number of large rivers on each side, and passes through

the Mississippi separates it from the Missouri, on the west; a line parallel with the south end of Lake Michigan, from the northwest territory on the north; it has the Wabash for two hundred and forty miles from its mouth, from Indiana on the east.

The rivers and streams that wash the various parts of this state, are almost innumerable; and to particularize them all, would be tedious to the reader, and a waste of time to the writer. I shall barely mention some of the most noted of them.—The *Illinois* is the largest that is peculiar to this state. This is a noble river, rising near the south end of Lake Michigan. Its head branches are called the Plein, and Theakakee or Kenkakee. The Plein is navigable within two miles of Chicago river of Lake Michigan, and boats are said to have passed loaded from one to the other at high water, the distance between them, being a marsh and in high floods it is completely inundated. The *Illinois* runs in a southwest direction for about four hundred miles, and empties in to the Mississippi, by a mouth about four hundred yards wide. The mouth of this river is nearly two hundred miles above the mouth of the Ohio, and twenty above the mouth

a lake called Illinois lake 20 m. long and 5 wide. This river is well calculated for navigation, being of a smooth gentle current, and unbroken by rapids throughout its whole extent. Kaskaskia is the next largest, its course is more southerly, it is about 300 m. long and puts into the Mississippi 100 m. below the Illinois. Fifty m. lower down Auvase empties in: this river and its branches waters a district 70 by 24 m. square. Between the Illinois and Kaskaskia is Wood river, and between Kaskaskia and the 4112 Auvase is the little river Marie. Above the Illinois is Sandbay and Rocky rivers which are large and run nearly west. The Saline (on which is the United State's salt works) 26 m. below the Wabash, Sandy Creek and Cash river fall into the Ohio on the south. Little Wabash, Fox, Embarass, Mascontin, St. Germain and Turtue put into the Wabash as you proceed north before you reach Fort Harrison. Those putting into the Wabash above, were mentioned in the description of Indiana. There are a number of small lakes in this territory, mostly in the north part, and on the American bottom. They all abound with fish and wild fowl."

of the Missouri. The country through which it passes, is said to be the finest in the world, possessing rich alluvion bottom, and on whose banks may be seen fields of corn growing to a luxuriance, that almost astonishes the eye of the beholder—It receives a number of large rivers on each side, and passes a lake called Illinois lake, twenty miles long, and about five broad. This river is well calculated for navigation, being of a smooth and gentle current, and unobstructed by rapids throughout its whole course. Kaskaskia is the next in size and grandeur, but its course is more southerly, and empties into the Mississippi one hundred miles below the Illinois, being about three hundred miles long. Fifty miles lower down the Auvase empties into the Mississippi; this river, and its branches water a district of seventy by twenty-four miles square. Between the Illinois and Kaskaskia is Wood river, and between Kaskaskia and Auvase is the little river Marie. Above the Illinois is Sandbay and Rocky rivers, which are large and deep, and they run almost a due west. On the Saline, twenty-six miles below the Wabash, the Sandy creek and Cash rivers fall into the Ohio on the south.

- 4114 The Little Wabash, Fox, Embarrass, Mascontin, St. Germain, and Fortue rivers, empty into the Wabash as you proceed north, before you reach Fort Harrison. Those that put into the Wabash above, will be mentioned in my letters to you from Indiana. There are a considerable number of small lakes in this state, most of which are in the north part, and on the American bottom land."
- 4115 My statement on transcript page 4101 (Abst., 1549) in which I compared Ogden and La Hontan from the point of view of the historical validity or weight of the two accounts, I did not mean to imply, as a reading of the
- 4116 record seems to, that I would attach equal authority to Ogden's statements contained in his letters that I would attach to La Hontan. I make this distinction. La Hontan's reputation aside from this sixteenth letter is on the whole very good, as Dr. Thwaites has pointed out. La Hontan has been carefully and keenly criticised by many students of history; Ogden has written almost nothing aside from this one volume, upon which we must base our judgment. It has never been subjected, so far as I know, to criticism by historians with the idea of determining its validity or authenticity.
- 4117 This pamphlet entitled "A Tour Through the Western Country, A. D. 1818 & 1819. By Benjamin Harding, Surveyor. Published for the use of Emigrants. New London: Printed by Samuel Green, for the Author. 1819," comprising 17 pages of text, is one of the sources from which Ogden's letters are drawn. I call attention to the resemblance which exists between Harding's introduction, and certain parts of the preface to Ogden's letters. Ogden begins with the preface in his work of plagiarization. He has not plagiarized literally except as to a certain sentence or possibly a part of a sentence. It is obvious to me, at least, that
- 4118 Ogden's preface is so like the introduction to Harding's pamphlet that from what I am prepared to show as to the character of Ogden's work as a whole, he had Harding's pamphlet before him and probably consciously

fashioned his own preface after this introduction to Harding.

To make this plain, I read the first paragraph of Ogden's preface (reading):

"The author of the following pages, having been employed for many years in business which necessarily required him to travel through the principal part of the United States, and having spent much time in the western territory of these states, he was induced to believe that it would be no small benefit to his countrymen to give a general descriptive view of it."

I read from Harding's introduction beginning about the middle of the paragraph (reading):

4119 "And as the author had been one in assisting to survey, and run lines, to a great portion of that country, whereby he had a greater opportunity to acquire a knowledge of the same, he was induced to believe it would be no small benefit to his countrymen, as so many were daily moving to those parts and inquiring for information concerning the country, give a general descriptive view of it."

Reading from Ogden's preface from where I left off reading (reading):

"The greater part of these letters were originally written to a brother, without the most distant view to their publication; they were generally written in haste, and have gone through very little, and some of them, no alteration from the originals. But such as they are, they are now before the public; and it is most sincerely hoped they will prove, in some small degree, beneficial to those for whom they are particularly designed—the great number of emigrants who are constantly moving to that country. Whether the delineations will be found correct, and the lights and shadows judicious, must be left to the plain, unostentatious observer, and to the acute, fastidious and acrimonious connoisseur."

In connection with this citation he plainly and positively asserts that the greater part of this letters were originally written to a brother, without the view to their publication, and were written in haste, and that there has been 4120 very little alteration from the originals.

I now read from the first letter of Ogden, page 5 of this volume, to show further the supposed circumstances under which these letters were produced (reading):

"Dear Brother:

After leaving your hospitable mansion, in which, for many years, I had enjoyed the most interrupted tranquillity and repose, on a journey to the Western World, it was your request that, from time to time, as occasion might offer, I would lay before you, a brief sketch of my perogrenations in this new and interesting part of our country. I presume your curiosity has, in a considerable degree, been excited by the great number of
 4121 scribblers and land speculators, who are swarming our eastern states, and, in very high and eloquent strains, for lucre's sake, representing it as a land flowing with milk and honey." * * *

Omitting a few lines Ogden plunges at once into his narrative as follows (reading):

"I have now arrived at Pittsburgh, a pleasant and flourishing town, where the Alleghany from the north and the Monangahela from the east, united and form the beautiful river Ohio, one of the handsomest streams of water in the known world, as allowed by all travellers, both European and American."

At this point he manifested his skill at appropriating the literary property of others. This passage is a close paragraph of the second paragraph of Harding's Tour, making it plain that the second paragraph of Harding's Tour is the source of this, the first of Ogden's reputed personal observations. I read from Harding's Tour (reading):

"At the head of the Ohio,"—and here there is a footnote which I read as follows: "A name given it by the
 4122 natives, signifying 'Beauty.'" (Continuing reading.) "One of the handsomest streams of water in the known world, as allowed by all travellers, both American and European, where the Alleghany from the north, and the Monongahela from the east, form a junction, stands the flourishing town of Pittsburg. At this place there is scarce any mechanical art but what is carried on in its greatest perfection."

Beginning with the sentence immediately followed the formal introduction, "I have now arrived at Pittsburg," and so forth, the letter contains 162 lines. I identify 135 of those as chiefly from Harding's Tour, partly also from Evans' Pedestrious Tour. This is the first of the three letters which Dr. Thwaites has observed constitute the personal observations of Ogden.

What foots up to 12 pages of Ogden is taken from
4123 Harding's pamphlet, which pamphlet contains a total
of but 17 pages, but the pages of Ogden do not contain
quite as much as the pages of Harding. The second letter be-
gins an account of Ogden's journey from Pittsburg down the
Ohio. Thwaites' introduction to Ogden in his "Early West-
ern Travels" comments particularly on that part of the work
dealing with the scenery and so forth, along the Ohio.

4124 I read first the opening portion of letter 2 of Ogden,
and then a citation from Evans' Pedestrious Tour, page
151, from which it is taken, and ask the Commissioner to ar-
range the citations in parallel columns.

Having taken the first page of letter 2 from Evans, the sec-
ond page continuing the description of the Ohio river and the
adjoining country contains but thirty lines and these are
plagiarized from three different sources, Evans, Miller and
Harding.

4126 (The respective passages read by the witness from
Ogden and Evans are as follows:)

(Ogden.)

"After remaining at Pitts-
burgh for three days, during
which time, I had an oppor-
tunity of witnessing much of
their hospitality and kindness,
I engaged a passage, on board
a boat, to explore the mouth
of the River Ohio. And,
while I am gliding along on
the bosom of this gentle
stream, I shall give you some
quaint idea of the villages and
towns that are situated upon
its banks; and the grand and
delightful prospect which is
everywhere presented to the
view of the traveller.

The length of this river is
computed to be upwards of
eleven hundred miles, by

4127 its sinuosites from
Pittsburgh to where it
looses itself in the Missis-
sippi, and its average breadth

(Evans.)

"After remaining at Pitts-
burgh two days, I descended
the Ohio for a few miles, and
then landed on its western
bank. The State of Ohio is
situated altogether on the
west of the river, and is
bounded east by Pennsyl-
vania, north by Lake Erie
and Michigan Territory, and
west by Indiana. The length
of the river is about eleven
hundred miles, and its aver-
age breadth about one-half of
a mile; in some places, how-
ever, its width is about twice
this distance. The river is,
generally, very deep, suffi-
ciently so for the navigation
of large ships. Its aspect is
placid and clear; and when
the water is high, is expansive
and beautiful. It contains a
great many islands, and is

half a mile; although in some places it is known to be twice that distance. This river is, generally speaking, very deep, sufficiently so for the navigation of large vessels. Its aspect is placid and clear; and when the waters are high, they are expansive and beautiful. It contains a great many Islands and is stored with fish and fowl of almost every kind.—”

4125 I ceased to read from Ogden at that point not because he ceased there to plagiarize, but simply to save time. Ogden having taken the first page of letter two from Evans, the second page containing the description of the Ohio river and the adjoining country contains but thirty lines and these are plagiarized from Evans, Miller, and Harding.

Letter 5 on Illinois, contains seven pages, the first 2½ of which are copied bodily with slight variations, from Miller's pamphlet, pages 21 to 22. All the remainder of the 4128 chapter is taken from Harding and Miller, except an eight line paragraph of Ogden, page 46, of one line on page 47, and a 7½ line paragraph on page 50. It is from the foregoing chapter that the section was read into the record by complainant's witness, describing the river system of Illinois. Concerning Brookville, Indiana, I read from Miller, page 21 (reading):

“At the close of the war Brookville contained but 10 or 12 houses. It now (July, 1817) contains upwards of 80 buildings exclusive of shops, stables, and out houses, the greater number of which were built during the last season. The buildings are frame and a great number of them handsomely painted.”

Turning to page 68 of Ogden, I read (reading):

“At the close of the war, Brookville contained but 10 or 12 houses; but now (1821) it has 102 buildings, exclusive of shops, stables and out-houses, the greater number of which have been built during the two last seasons. These buildings are framed, and a great number of them are handsomely painted.”

4129 The Quixotic Evans, as Dr. Thwaites has designated him, sometimes indulged in philosophic rhapsodies more

or less diverting. Ogden who wrote some years later, was addicted to the same habit. I here read a citation from page 182, of Evans, which I follow with a citation from page 70 of Ogden (reading):

(Evans.)

4131 "The whole creation
presents to the human
mind the most engaging sub-
jects of contemplation;—
subjects which speak to his
heart, and eloquently per-
suade him to love and adore
his Heavenly Father. The
Scriptures derive from this
source moral and relig-
4132 ous illustrations, which
are truly impressive;
in the 80th Psalm the Diety
speaks of his chosen peo-
ple under the similitude of
a vine brought out of Egypt;
and on account of transgres-
sion, 'The boar out of the
wood doth waste it, and the
wild beasts of the field doth
devour it.' David, in repre-
senting the happiness, securi-
ty, and comfort of a christian
spirit, exclaims, 'the sparrow
hath found an house, and the
swallow a nest for herself;—
even thine altars, O Lord of
hosts!' And in speaking of
the universal care of Provi-
dence, he says, 'He giveth to
the beast his food, and to the
young ravens which cry.'
Jeremiah too, in censuring
the Jews for their insensibil-
ity and impenitence, de-
4133 clares, 'yea, the stork in
the heavens knoweth
her appointed times; and

(Ogden.)

"The whole creation pre-
sents to the human mind the
most engaging subjects of
contemplation;—s u b j e c t s
which speak to his heart, and
eloquently persuade him to
love and adore his Heavenly
Father. The Scriptures de-
rive from this source moral
and religious illustrations,
which are truly impressive;
in the 80th Psalm the Deity
speaks of his chosen people
under the similitude of a vine
brought out of Egypt; and on
account of transgression,
'The boar out of the wood
doth waste it, and the wild
beasts of the field doth devour
it'—David, in representing
the happines, security, and
comfort of a christian spirit,
exclaims, the sparrow has
found a house and the swal-
low a nest for herself; even
thine altars, O Lord of hosts!
And in speaking of the uni-
versal care of Providence, he
says, He giveth to the beast
food, and to the young ravens
which cry. Jeremiah too in
censuring the Jews for their
insensibility and impenitence,
declares, yea the stork in the
Heavens knoweth her ap-
pointed times; and the turtle,
and the crane, and the swal-
low, observe the time of their

the turtle, and the crane, and the swallow observe the time of their coming; but my people know not the judgment of the Lord! Lastly, how supremely interesting, in view of the innocence of the lamb, is the exclamation, 'Behold the Lamb of God which taketh away the sins of the world!' The Author of the Scriptures is, indeed, the great God of nature; and in his Word, he has employed that wonderful pencil, with which he has garnished the heavens."

coming; but my people know not the judgment of the Lord."

Evans further undertook to describe the opossum. A portion of this description I read from Evans, page 183 (reading):

4134 "It is well known that the opossum, at its birth, is remarkably small; but the account which I received from an intelligent farmer of Indiana, in relation to this particular, is almost incredible. This account, however, seems to be supported analogically, by the testimony of naturalists. The young of the marmose, a species of opossum, is, when first born, not larger than a bean. This animal has two longitudinal folds of skin, near the thighs, in which her young are comfortably kept until they acquire strength enough to take care of themselves."

4135 Turning now to Ogden, page 71, I read (reading):

"It is well known that the Opossum, at its birth, is remarkably small; but the account which I received from an intelligent farmer, of Indiana, in relation to this particular, is almost incredible. This account, however, seems to be supported, analogically, by the testimony of naturalists. The young of the Marmose, a species of the Opossum, is, when first born, not larger than a bean. This animal has two longitudinal folds of skin, in which her young are comfortably left until they acquire strength enough to take care of themselves."

Ogden has copied Evans' description of the opossum further than I have read. Evans commented on a floating grist mill in use on the Ohio river. I read from Evans, page 165 (reading):

“Whilst on the Ohio, I was pleased with the appearance of the floating grist-mill used on this river. This kind of mill is supported by two boats, and the wheel moves between them. The boats move both up and down the river, and when employment can be obtained, they are placed in the strongest current, near the shore, and
4136 the mill is set in motion. Here there is no tax for ground rent, mill-dam or race.”

Ogden, too, was pleasantly aroused by this same spectacle, 3rd letter, page 23 (reading):

“Before I leave this state, although I shall, at some future time, give you a more particular account of it, I will remark one thing; which, at the time, gave me peculiar pleasure; I allude to the floating grist mills which are used in abundance on this river. This kind of mill is supported by two boats, and the wheel, which is the principal part of the machinery, moves between them. These boats move in every direction upon the river, and when employment can be obtained they are generally placed near the edge of it in the strongest current, and the mill is then set in motion.”

I now call attention to Ogden's greatest achievement, that of changing a woman into a man. I was at a loss to account for the name *Prairie de Rogue*, which Ogden ascribes to one of the French villages of the Illinois country, until I came
4137 upon the passage from Harding on page 10, which I read, and then read from Ogden (reading):

(Harding) p. 10.

(Ogden) p. 52.

4138 “Twelve miles to the west of this stands another French village by the name of *Prairie-De-Rouge*; this likewise appears to
4139 be an ancient town, much decayed. Here I met with but one family *Madame Latounte*, that seemed to have any just idea of the advantages of improvement. She had a daughter who had been sent abroad and received an English education. She could speak the

“Twelve miles to the west of this, stands another French village by the name of *Prairie-de-Rogue*; this likewise appears to be an ancient town, and fast falling to decay. I found in this place but very few people, who could speak with any degree of facility, the English language. I became acquainted, however, with Mr. Lamoil, who had received his education in France, but had lived in this country for many years, who

English language with a great deal of ease; her mind was very much refined, and her manners greatly improved. This place contains somewhat about one hundred houses. The men appeared hardly to know the use of agriculture, but followed fishing and hunting. They have one cathedral, or place of public worship; their religion is of the Roman Catholic. As they have obtained a grant 4140 from Congress securing to them a tract of land six miles square, and their living so secluded among themselves, it is not likely that they will very soon be brought out of that indolence and superstition, which they are so attached to."

could speak English with some degree of facility; he was the only person, who appeared to have any just idea of the advantages of improvement. He had a daughter who had been sent abroad and received an English education. She could speak the English language with much ease. Her mind was highly refined, and her manners greatly improved. This place contains about one hundred houses. The men here appear to know hardly anything about agriculture, but follow, for a living, hunting and fishing. They have one Cathedral, or place of public worship; their religion is the Roman Catholic. As they have obtained a grant from Congress, securing to them a tract of land six miles square, and their living so retired among themselves, it is not likely that they will very soon be brought out of that indolence, and superstition, to which, at present, they are so rigidly attached."

I have examined the excerpt from Volume 3, Schoolcraft's Archives of Aboriginal Knowledge, page 353, transcript pages 182 to 186, (Abst., 77-79) referred to in Alvord's 4141 direct, in which appears the following at page 186 (reading):

"We left Cahokia on the 4th of May, for Mackinac. My directions were to pass by Chicago, having one barge and one canoe, and to await the arrival of M. Marchisseaux at Little Detroit, in lake Michigan, he having gone by the way of Prairie des Chiens, to terminate his business with the Sauks."

It was referred to by Alvord as being a reference to the

use of the Chicago and Desplaines portage. The article shows that Perrault went from Canada by way of Green Bay and Prairie du Chien to St. Louis; that he returned by way of the Illinois river and Chicago, leaving Cahokia on May 4th, and stopping 14 days on Lake Michigan, reaching Mackinac early in July. There is no indication of Perrault's experience on the Desplaines. This passage must be interpreted, if used at all, in connection with other sources which actually describe the passage of the Desplaines.

4142 Perrault came up in the spring, leaving Cahokia May 4th; presumably the water was higher at this season of the year than at some other seasons. From other sources we know that it was possible to pass up the Desplaines at a time when the water was high. That Perrault actually did pass up the Desplaines must rest on inference. In view of some of the historical sources, it is not a necessary inference, from the mere statement that he was directed to pass by Chicago that he actually passed up the Desplaines. For example, Collot,—I am speaking from memory, speaks of going by the Calumet to Chicago. It is conceivable that one might pass up the Kankakee to the St. Joseph and reach Chicago by that route. I do not assert that this is probable when the details are lacking.

I have examined the excerpt from St. Cosme, Alvord's direct examination, transcript page 112 (Abst., 48), which is from Shea's *Early Voyages up and down the Mississippi*. St. Cosme was a Canadian, born at Quebec, ordained in 1690, and went at the time which is dealt with in this source on a mission to the western Algonquins. He was a seminary priest of the order which entered in this field of missionary endeavor in the fall of 1698.

He was stationed first at Tamarois, or Cahokia, and then at Natchez; was assassinated about 1702 or 1707. These statements are based on sketches of St. Cosme found in Shea, page 45, and 65 *Jesuit Relations*, p. 262. In this expedition, St. Cosme, Davion and Montigny, three priests with others left Mackinac September 14th. They went by way of Green Bay and the western side of Lake Michigan. eight canoes, these last four destined for the river of the Miamis, three belonging to the priests and one evidently to Tonty, being destined for the Mississippi river.

4144 On October 7th, they were at Milwaukee, and on the information they got from the Indians, they planned to go up the Root river, there described by the Indian name, which

flows into Lake Michigan near Racine, down the Fox to the Illinois. They found the Root dry and concluded the Fox would be also. Shea, page 51, "Instead of shortening our way, we should have had to make nearly forty leagues of the way as a portage." They were obliged to take the route by way of Chicago. Tonty was the guide and familiar with the Chicago-Desplaines route. The Indians told them they would have to make a portage of nine leagues going by way of the Root and Fox rivers, yet they deliberately planned to go by this way and thought thus to shorten their way to the Mississippi. They rejected the Root and Fox rivers, only on finding the Root river dry, necessitating a portage of nearly forty leagues. This indicates that Tonty expected as a matter of course to have a longer and more difficult portage by way of Chicago. I mean to say longer and more difficult than the nine league portage, obviously not longer than the forty league portage; in fact from St. Cosme's narrative they had to portage about $17\frac{1}{2}$ leagues down the Desplaines to the Illinois. According to La Source, 15 leagues, the two letters being written independently at different times. On the whole, the two accounts corroborate each other very well in this particular. It appears from the narrative that the water being extremely low, they took only what was necessary for their voyage, to accomplish which they made a cache at Chicago, leaving their goods in charge of Brother Alexander, and planning to come back for it in the spring. This also corroborates the La Source account.

4146 They went down the Illinois and Mississippi to the Acanseas River, 250 leagues below the mouth of the Illinois. Tonty went with them that far, then returned to the Illinois country. Turning to La Source, page 79 Shea and concluding on page 86; La Source was a priest ordained at Quebec, was a member of this expedition, and his letter re-
4147 counts the events of the same expedition as those of Montigny and St. Cosme. It is evidently written considerably later. On page 80, he tells of the further journey down the Mississippi from Acanseas to the Tonicas. Here Davion established his mission. Pages 80-81 described the Tonicas. Page 81, after 8 days they go on to Tolusas, 20 leagues below where Montigny stationed himself for a short time. (See Montigny's letter, page 76, Shea.)

Continuing La Source, page 82, they reached Tolusas January 21st. Montigny and most of the others were sick and

short of food. After describing the Tolusas, Montigny's letter ends. On page 83, on January 27th, they left the Tolusas and returned up the river to the Tonicas, where Davion was stationed. Montigny and St. Cosme resolved to go up together, page 83, "to bring down the things left at Chicago, where Brother Alexander had remained to guard them, because there was no water in the river of the Illinois. We brought only a canoe load of absolute necessities which
4148 we had to carry for a distance of 15 leagues."

This is the basis for my comparison of the statements of St. Cosme and La Source. It appears they had "good cheer" on their return up the Mississippi (reading) p. 83:

"There were some Illinois villages that wished to oppose our voyage, but they gained nothing; we passed on in spite of them and their envy. Mr. de Tonty kindly accompanied our gentlemen as far as the Acanseas. We were a strong party, and going up the Illinois river we came near being plundered by the Miamis. They boasted that they would rob us as we came up the Illinois river. We are not in the humour of letting ourselves be plundered. We are thirty men to defend the river of the Illinois. There are as many people at the Tamarois as at Kebeq. Mr. de St. Cosme is at the Tamarois, which is eight leagues from the Illinois. It is the
4149 largest village that we have seen. There are about 300 cabins there.

We arrived on Maundy Thursday at Chicagou after making thirty leagues by land. It rained during the last two days of our march. Mr. de Montigny was much fatigued and I was no less so."

They reached Chicago on Maundy Thursday, which complainant's witness states is the Thursday before Easter, "after making thirty leagues by land." I infer that this 30 leagues constituted the last lap of the journey they were making. That prior to this they travelled on the river. If this is a valid inference, it follows that they travelled by land from a point approximately 90 miles below Chicago. Montigny returned to Chicago for it is stated he was much fatigued. This page shows that the original plans expressed in St. Cosme's and Montigny's letters written earlier were changed on account of the killing of three Frenchmen and the sickness of the party.

4150 Montigny intends to go back to Taensas and may go to the sea. Page 85 La Source tells of the loss of the

boy on the expedition down the river. He shows the date of the letter to be Maunday Thursday. It was evidently written at Chicago, between that day and Easter Monday.

These three letters were written at different dates; two of them at approximately the same date by the three authors who were engaged on a trip from Mackinac to the lower Mississippi region to establish missions; the time covered in the three letters being September 14th, 1698, to about Easter, 1699. If the three letters are read together, and in the light of or in connection with the others, they are not hard to understand. St. Cosme appears to have written his letter about January 2nd, at the mouth of the Acanseas river. (Shea, p. 74.)

4151 Montigny wrote his on January 2nd at the same place, indicated by the letter itself. La Source wrote his at Chicago about Easter, 1699. From the first two we get an account of what the missionaries did about the time of writing their letters about January 2nd, 1699, and some indication as to what they planned to do. From the last letter, we learn why their plans were modified, and that they returned to the Illinois country and some of them to Chicago. It appears that they passed down the Mississippi to the Acanseas river, having been forced by low water to leave most of their goods at Chicago. They began the establishment of missions, and Montigny planned to go among the Natchez and to the sea, but sickness seized them, and provisions became scarce; they heard news of the killing of three Frenchmen, and Montigny gave up his project for the time being. Near the end of January, Montigny and St. Cosme decided to return to Chicago for goods, and the party came up the Illinois, concluded by making thirty leagues of the journey by land. St. Cosme, I think, stopped at Cahokia; the evidence is not clear.

4152 Montigny and La Source went on to Chicago; it is pointed out, being much fatigued by the march or journey.

Having in mind Thwaites' conclusions as to La Source's account, transcript, 1233 (Abst., 509), and 1069 (Abst., 449), wherein he regards as practically impossible of solution I would say, I believe he has over emphasized the impossibility of making anything out of La Source's account. True, the letter changes abruptly from one topic to another, and the letter as I have already pointed
4153 out, is in places quite confusing, and is not an orderly one. On the whole, however, one may follow it by keep-

ing in mind the facts, as my brief of the contents will indicate. Shea obtained these letters from Parkman and the transcriber evidently performed his work poorly and his errors may not have stopped at proper names, but may account for the confusion, particularly in the paragraph on page 84. (See Shea's comment in footnotes, pages 39, 51, 62, 65, 66 and 73.) Observing then that there are several perplexing things in this letter, and in particular in the paragraph on pages 83, 84. I think it reasonably clear that this paragraph to which I have just referred continues the account begun near the top of page 83 of the return from the lower Mississippi to Chicago. That it is a reasonable inference that they came up the Illinois river, but (and this is no inference) the last thirty leagues of the journey was made by land.

La Source's letter dove-tails in with those of St. Cosme's and Montigny in so many respects as to furnish presumptive evidence as to the trustworthiness of all three of the letters.

4155 To connect the Root river with the paragraph read by complainant's witness, transcript, p. 113 (Abst., 49), beginning, "Some Indians had led us to suppose that we might ascend by this river," I read the next preceding, page 50 (reading):

"On the 10th of October, having left Meliwarik early in the morning, we arrived in good season at Kipikawi which is about eight leagues from it. There we parted with Mr. de Vincennes's party."

4156 I read the footnote as follows:

"I do not find this name of Kipikawi or Kipikuskwi elsewhere. The river is evidently that emptying into the Lake at Racine, and this route was up the Root River and then by a portage across to the Fox or Pishtaka (Bestikwi) River, which they descended to the Illinois. * * *"

4157 I have studied the passage, from an article by John Pattin, referred to by complainant's witness on transcript pages 698-699 (Abst., 289-290) which is taken from 18 Wisconsin Historical Collections, page 146, the sentence beginning: "The other is from Missilimakinac to the Lake Illinois four Leagues, thence one hundred and fifty Leagues on the Lake to the river Chigagou, up the River Chigagou they sail but three Leagues to a Portage of a quarter of a League, then they enter a small lake of a mile, and have another small

Portage to the River Illinois, thence down the same one hundred and thirty Leagues to the Mississippi."

I conclude that this is merely a restatement or paraphrasing so far as it concerns the Chicago and Illinois route, of James Logan's report.

4158 A comparison of the two citations shows such a similarity between them that it seems a fair inference that Pattin's description was drawn from Logan's report.

I call attention to Logan's report as found on transcript page 132 (Abst., 57) (reading):

"From the Lake Huron they pass by the straight Michillimackinac four leagues, being two in breadth, and of a great depth, to the Lake Illinois; thence 150 leagues on the lake to Fort Miamis, situated on the mouth of the river Chicagoe; from hence came those Indians of the same name, viz: Miamis, who are settled on the fore-mentioned river that runs into Erie.

Up the river Chicagoe they sail but three leagues to a portage of one-fourth of a league; then enter a small lake of about a mile, and have another very small portage, and again another of two miles to the river Illinois; thence down the stream 130 leagues to the Mississippi."

If these two citations are put in juxtaposition, the reason for my conclusion is visible.

4159 Long's report, which comprises some five pages of the National Register, deals with the rivers, the need of proposed canals and roads, of military works, the aspect of the country, trees, soil, etc., and the Indians of the region from the Ohio on the east, and the Mississippi on the west, and from the Ohio on the south to the Milwaukee and Rock rivers, Lake Michigan and Michigan Territory on the north.

I have read the extracts from Schoolcraft read into the record by complainant's witnesses, and examined the context in which they appear, and have noted the estimates of 4160 the authority of Schoolcraft, and deductions drawn from excerpts cited by complainant's witness. On pages 8 and 9 of Schoolcraft's Journey through the central Mississippi Valley, is an account of the purpose of the expedition, or the route, and Schoolcraft's appointment. Pages 12 and 13 give an account of the equipment of the party for the expedition, under the heading of "Mode of Traveling," which points out he used a canoe holding some 8 or 9 men, and very limited

equipment, which is pointed out on page 13. I roughly
4161 estimate that the whole load of this canoe would be
from 2,000 to 2,500 pounds, which estimate is based on
the following, page 12:

"Mode of Traveling: or rather, as a slight consideration of the nature of our route, will leave the reader to anticipate, of our traveling canoe." (Traveling canoe being italicized.)

4162 "In its dimensions a choice was made between the long and pointed northwest canoe, employed in the fur trade and the light ovate canoe of the lakes, combining a good degree, the strength, the buoyancy, and the velocity, which are the peculiar characteristics of each. And our bark afforded perhaps an equitable standard of comparison of the safety and convenience of this expedition, and, as we think, pretty mode of voyaging. It was furnished with a small mast and square sail, and an awning of painted cloth, with side curtains to intercept the rain, and mitigate the boat; and contained seats for six men to paddle, and another for a servant and cook, in addition to the space for the steersman, who performs his duties standing."

Our own seats were made by opening a travelling bed upon a light portable floor placed between the center thwarts of the canoe, and so arranged as to serve the double purpose of sitting and reclining;—or rather, so as frequently to keep the body in a state of involuntary accuvation. Our whole amount of personal baggage, beside a camp-bed and a case of books and magazines,
4163 might have been compressed within the compass of a moderate capacious traveling trunk; and our outfit of provisions, and the luggage of the canoe men, were ordered with the same economical view to the capacity of our bark, and the acceleration of its movements.

A linen marque, a few instruments necessary for making observations upon such branches of science as we purposed noticing, the tools and utensils necessary for cooking and encampment, and the requisite gum and wattap for repairs to the canoe, completed the outfit. An oil cloth, which could be spread in a few moments over all, secured the packages against sudden showers, or the effects of waves breaking in. A small ensign was affixed to the stern, giving a national character to the equipment; which it can scarcely be deemed improper

to add, was liberal without being cumbersome, and united the advantages of speed and economy, without wholly sacrificing comfort.

"Let school-taught pride dissemble all it can,
These little things are great to little man.

—Goldsmith."

4164 It appears they came up the Illinois to approximately Starved Rock, pages 318-319, where they found the water too shallow for the canoe, being often less than 4 inches deep. Page 321 (reading):

"Finding the navigation so difficult we determined to relinquish the design of proceeding any further by water," and to go on horseback to Chicago, this being about the 11th or 12th of August, 1821.

On page 328 is an account of the petrified tree near the mouth of the Desplaines. The depth of the water over the rock, as he calls the tree, was commonly little more than 12 inches. The footnote reference here is to Thomas Tousey of Virginia, which I now read (reading):

4165 "Thomas Tousey, Esq., of Virginia, who visited this locality in the autumn of 1822, found nearly the same depth of water in the Desplaines. He writes: 'With your memoir in my hand, we rode up and down the river, till the pursuit was abandoned by the others; while my own anxiety and zeal did not yield until it was discovered. The detached pieces we found covered with twelve to about twenty inches of water, and each of us brake from them as much as we could well bring away.'"

Schoolcraft says Mr. Tousey visited the locality in the autumn of 1822. The entry from Tousey's journal or letter in Schoolcraft's Journal is of date June 10, 1823. I do not see from a hasty examination when he actually made the journey.

4166 On pages 332-334 of Schoolcraft's volume is a description of the Desplaines, of the rapids in it, and Schoolcraft's comment on the error of thinking that a short canal of eight or ten miles would be sufficient to answer the needs of trade. He points out that some trader's with whom he talked thought it would do to enter the Illinois (Desplaines) at Mount Joliet; observes this would make the portage thirty miles. That his own experience was that he must leave the river far below that point.

As for Schoolcraft as an authority in general, I see no

reason for disagreeing with the witnesses for the United States. In places he is the subject of criticism, just as is the work of every historian. On the whole, he may fairly be regarded as a scientific, careful, scholarly observer. His works have the reputation of constituting high authority for the things with which they deal, and with which it appears in them that Schoolcraft might reasonably be expected to be familiar.

4167 On transcript page 331 (Abst., 154), Schoolcraft speaks about the Illinois-Chicago river, being one of the principal points where the waters of the lakes and the Mississippi interlock. He applies the term "Illinois" to the whole Illinois-Desplaines system; "1. By the Illinois and Chicago Creek (with Lake Michigan)."

It may be correct to say that the waters of the Mississippi communicate with the lakes by these rivers or creeks as he used the term with reference to the Chicago; any inference as to the character of the upper portion of the Illinois river system, that is the Desplaines, should be controlled and construed by Schoolcraft's detailed account given elsewhere, of the character of the stream.

A reference to that account appears at page 542, in connection with Schoolcraft's Journal of Travels in the Central Portion of the Mississippi Valley, and shows that he found it impossible to pass along the Desplaines in a canoe, and that having given up the canoe and journeyed along the general route of the remainder of the Illinois and Desplaines on

horseback, having been along the banks of the Desplaines
4168 for the greater part, but having seen the river itself only seldom, came to the conclusion that the Desplaines was not navigable at that particular season of the year. He pointed out the error of those who thought a canal of eight or ten miles in length would provide a water communication with the Mississippi. Traders whom he met on the plains transporting their goods by means of carts, thought it practicable to enter the river at Mount Joliet; that a canal of thirty miles in length would answer, but Schoolcraft points out that "his own experience" reveals that while such a canal would perfect communication at certain seasons, it would fall far short of the grand purpose.

Therefore, Schoolcraft's conclusions and experience as shown in the volume "Travels in the Central Portion of the Mississippi Valley" prevent any inference from the statement contained in the record, page 331 (Abst., 154) to the ef-

fect that that passage indicates anything as to the character and nature of the use that might be made of the Desplaines river.

4169 His statement that the French used this route for 160 years, was written in 1832, and should be interpreted in harmony with Schoolcraft's statement based on the trip up the Illinois in 1821. It is a reasonable conclusion that they may have used the route without concluding that Schoolcraft implies that the route was used in boats in water all the way. If such an inference be drawn from the latter statement, it would conflict with what he wrote of his trip in 1821. It does not seem probable he would retract a detailed narrative by a mere implication.

As to McLaughlin's conclusion concerning the validity of Schoolcraft's statement of the use of the route for 160 years, I observe, as he pointed out, that Schoolcraft had certain advantages over the modern student. However, the latter has certain more important advantages, as access to greater libraries, collections of historical sources. Tradition or
4170 common repute as handed down by word of mouth does not accurately hand down facts for a period of a century and a half. For a long period, Schoolcraft must depend chiefly on sources other than oral, therefore, his conclusion is valid or not according to the completeness of the sources at command, and the skill which he evinces in using them. The statement of a recognized modern authority would properly far outweigh Schoolcraft from the point of view of validity as an authority.

I have examined Tousey and the letter referred to by Schoolcraft, mentioned by me in that connection.

4171 Tousey, a Virginian, passed through the Illinois country in 1822. His letter to Schoolcraft appearing in Schoolcraft's *Thirty Year's with the Indian Tribes*, pages 179 and 180, expresses surprise at the advantages of the northwest, and confidence in the future of this region. Concerning the Desplaines route, and the projected canal, he regards Green Bay and Chicago, particularly the latter as two very important positions. For many years he anxiously desired to see the country between Chicago and Illinois rivers. Page 180, (reading):

"Where it has generally been ignorantly supposed that only a small sum would be wanting to open a communication between them. By traveling on horse back through the country, and down the Illinois, I have con-

ceived a different and more exalted opinion of this communication, and of the country, than I had before, while I am convinced that it will be attended with a much greater expense to open it than I had supposed."

Points out he found fossil tree with considerable labor and difficulty (reading):

4172 "This I anticipated from the commonly reputed opinion of the uncommon height of the water. With your memoir in my hand, we rode up and down the waters till the pursuit was abandoned by the others, while my own curiosity and zeal did not yield until it was discovered. The detached pieces were covered with twelve to twenty inches of water, and each of us broke from them as much as we could well bring away."

The letter is written by an optimist, not only concerning the Northwest, but the Chicago-Illinois canal communication. His prejudice or unconscious bias would naturally be in favor of the canal. Tousey may reasonably be considered a witness against his own interest. I regard his letter, therefore, as evidence of considerable importance in opposition to the ignorant opinion, as he puts it, as to the ease of opening a canal between the Chicago and the Illinois. Tousey's visit was in the autumn of 1822. The letter states that "from the reputed opinion, the water was uncommonly high," yet he found over the petrified tree the depth 4173 was from 12 to 20 inches, the same as Schoolcraft found on his journey in 1821.

I have examined the letter from Prideaux Selby to Peter Russel, volume 18, Wisconsin Historical Collections, page 458, referred to by Alvord, particularly the passage beginning, transcript 214-15 (Abst., 91-92):

"But that the water communication by the Ouisconsin to Lake Michigan, (except an inconsiderable carrying place between that and Fox river) opens an easy passage for the introduction of troops and all manner of stores either by way of Chicago or Missilimackinac.

That the route by the Illinois river tho' much nearer, does not afford such advantages for bringing forward supplies as the Ouisconsin, and altho' in the Spring of the Year, the waters are always high by the dissolving of the Snow and frequent rains at that season, yet it is presumed the swelling of the Illinois may have subsided before an army could be in readiness to take the advantage of that circumstance and it must be observed

also that there are many interruptions on this communication such as Rapids and Shallow waters. The Ouisconsin therefore appears their most (best) route as it is the easiest and most secret as well from its distance from any body of Traders as from the little inter-
4174 course we have with the Indians inhabiting that part of the Country."

That letter points out that the Spanish cannot come by way of the Ohio unless the people of Kentucky and Ohio join with them. Two routes therefore remain, the Fox-Wisconsin, and the Illinoish route. The former is preferable, although the Illinois is much nearer, because it affords greater advantages for bringing supplies. The Illinois is shown as high in the spring but it is supposed it will have subsided before an army can take advantage of it, and there are many interruptions on this communication in the way of rapids and shallow waters, and might be supposed to abound most in the upper Illinois, which supposition is not out of harmony with the knowledge we have of the nature of the Desplaines.

The writer concludes that it is enough to lead to the rejection of the Illinois as a route of defense. The impli-
4175 cation there may be from this letter as to passing boats along the Desplaines would be rather against than in favor of the possibility, except in time of spring flood, which as he points out is so short he assumes it will have passed away before an army can take advantage of it, agreeing in this observation with what La Salle has said concerning the route. The letter is dated January 23, 1799.

I am familiar with the passage from Warden's History of the United States, published in 1819, referred to by Alvord at transcript page 272, the passage appearing at transcript pages 273-74 (Abst., 124). Warden cites as authority for his account of the Illinois and Chicago rivers the letters of Long and Hutchins' Topographical Description, page 42. A comparison of Warden's account with these sources, shows that
4176 he has taken a considerable portion of it from Long, and one statement apparently from page 42 of Hutchins, the one as to the portage being not over four miles long. Whatever weight attaches to Hutchins and Long, attaches to Warden, if he has faithfully reproduced their statements. That is, Warden does not constitute additional authority on the Illinois river and the Illinois-Chicago route. Warden's statements about navigability of the Illinois need careful scrutiny. In volume 1, page 121, he says that the

Illinois "affords an uninterrupted navigation of 230 miles for large boats and for small ones for a distance of 460 miles, where it approaches Lake Michigan."

In volume 3, page 48, he says the Illinois "is boatable to the Little Rock, sixty miles from the forks or extreme branches, and, 270 from its outlet." The distinction between "boatable" and "navigable" is not apparent, and I assume as a probable explanation that he overlooked the fact he had made a conflicting statement about the same matter in the first volume.

4177 He further states, Volume 3, page 48:

"By the channel of the Chicago or Calumet river, it furnishes a water communication with Lake Michigan, with only two portages, the longest of which does not exceed four miles."

His authority for this is Hutchins' Topographical Description, page 42. Evidently, Warden confuses the Calumet and Chicago rivers, assigning the portage to the two indifferently. He says:

"By the channel of the Chicago or Calumet river it furnishes a water connection with Lake Michigan."

To compare Warden's figures with modern figures, I use the Century Dictionary, Volume 9, and select the rivers most readily found therein which appear in Warden.

First, as to the Illinois river; Warden, Volume 1, page 121—and I give the substance of these statements without
4178 pretending to quote literally—Navigable for large boats 230 miles; for small boats 460 miles.

Century Dictionary, Volume 9, page 525, Navigable 245 miles.

Second, the Iowa river; Warden, Volume 1, page 126, Navigable 300 miles.

Century Dictionary, Volume 9, page 838, Navigable 80 miles.

Third: Racoon river; Warden, Volume 1, page 127, Navigable some hundred miles.

Century Dictionary, Volume 9, Length 175 miles; no navigability stated at all.

Fourth, the Minnesota river; Warden Volume 1, page 125, Navigable 400 miles.

Century Dictionary, Volume 9, page 689, no Navigability stated.

Fifth, Des Moines river; Warden, Volume 1, page 127, Navigable 450 miles.

Century Dictionary, Volume 9, states the length from the forks in Humboldt County as 300 miles. States further that it is navigable to the city of Des Moines.

Without knowing the exact figures, I know as a matter of fact, the Des Moines is a considerable distance below the forks of the river, so that the difference would be considerably more than the 150 miles contained in the two sets of figures. Either Warden's statements are not to be relied on as accurate, or he has attached a different significance to the term "navigation" than that in view when the statements were made up for the dictionary. I presume, both of these alternatives have some measure of truth in them, and that Warden based the distances on estimates, and by "navigation" means mere canoe navigation. Warden usually gives authorities for his statements, so he escapes responsibility for errors. The two sources he gives for his account of the Chicago and Illinois rivers are Hutchins and Long. His repetition of their statements adds nothing to their original force.

Warden uses the term "navigable" and makes statements regarding navigability of streams in what may be described as a loose, inaccurate fashion.

Motion to strike out references to Century Dictionary. Not shown to be a work of known standing and accuracy.

The WITNESS (continuing): I have considered Winsor's Narrative and Critical History, Volume 5, page 7, pages 224, referred to at transcript pages 352-353 (Abst., 165), the passage reading:

"Three of these were especially used,—one by way of Lake Erie, the Maumee, and the Wabash, and then down the Ohio; another by way of Lake Michigan, the Chicago river, a portage to the Illinois, and down that river;"

Also the passage in Volume 4 where he speaks of the principal portages by which passage was early made by canoes, and names:

"2. By the Chicago river, at the southwest of Lake Michigan to the Illinois, thence to the Mississippi."

These passages speak of portages from Lake Michigan to the Illinois. They state nothing as to the Desplaines river. I think it a fair inference that mention of the Desplaines was omitted because the writer did not care to indicate specifically the length of the portage made by early travelers, possibly

because it was evident or known to the writer that sometimes the portage was to the modern Illinois.

Motion to strike out; conclusion of witness.

4182 The WITNESS (continuing): With reference to the standing of Hinsdale's Old Northwest, referred to by complainant's witness, transcript page 355 (Abst., 166), I observe that the characterization is too generous to Hinsdale. If sufficient emphasis be put on the adjective "secondary" in Alvord's statement, perhaps no issue need be taken with reference to this estimate. To call attention to Carter's estimate about this, and of another of Hinsdale's works, I read from Carter's Critical Bibliography under the sections "Special and Sectional Treatises," page 196, (reading):

"Hinsdale, B. A., *The Old Northwest*. New York, York, 1888—Not based on original research. Very uncritical.

Hinsdale, B. A. 'The Western Land Policy of the British Government from 1763 to 1775,' in *Ohio Archaeological and Historical Quarterly*. Columbus, Dec. 1887,—Uncritical and unreliable."

4183 However, with respect to this particular citation from Hinsdale, so far as this is concerned, I see no reason for taking issue with Alvord's characterization for it may perhaps be a tribute to his caution and care as a historian that in speaking of the Chicago-Illinois route of travel, he avoids making any mention of the Desplaines. Referring to 16 Wisconsin Historical Collections, page 332, Document on the Military Preparations against the Foxes, appearing at transcript pages 121-123 (Abst., 52-53), concluding:

"It would also be very useful to establish a post at Chicago, to facilitate access to the Illinois and the Miamis, and to keep those nations in our interests."

I would say this document shows there was travel between the lower Illinois and Lake Michigan. Do not see that it indicates anything directly as to the use of the Desplaines.

Turning to Volume 16, Wisconsin Historical Collections, page 372, referred to by Alvord transcript 124 (Abst., 54), the citation appearing at transcript page 125 (Abst., 54):

"The quicapoux and the mascoutins are not far from chicagou, it may be fifty Leagues distant. When they 4184 wish to go destroit or the St. Josephe River they have to pass by way of chicagou."

Also the footnote by Thwaites, transcript page 126 (Abst., 54), beginning: "The St. Joseph river formed, with the Kan-

kakee," etc. This document was written in 1718 on 1717. It gives a report on the whole region from Canada to the Mississippi. Report is anonymous, but endorsed. Page 376: "Furnished by Monsieur de Sabrevois in 1718. 6 Canada."

Not probable that writer has first-hand knowledge of the whole region. Reference is so indefinite as to amount to very little one way or another.

4185 Have examined Woodruff's History of Will County, and the excerpts referred to by Alvord at transcript page 338 (Abst., 158). It is a county history. The portion read from pages 607 and 608 of Woodruff is not by Woodruff himself, so his reputation as a historian, to which the witness for complainant testified has no bearing on the authority of this citation. Since the statement about steamboats carrying heavy articles regularly down the Kankakee and up the Desplaines to Chicago in 1878 is evidently untrue, and it seems a fair presumption that the writers must or should have been aware of this; I think no weight whatever should be given to an anonymous statement or statements by the writer or writers about a practice fifty years earlier, especially since it conflicts with other and better evidence in this case.

Woodruff himself in his pamphlet entitled "Forty Years Ago," page 66, the second of a series of lectures delivered in 1874 on the history of Joliet and Will County, makes statements that if true render the one here so improbable to

4186 make it impossible for one to accept. The substance of Woodruff's article states that the opening of the canal meant a new era in the history of Joliet and vicinity; that hitherto goods had been transported from Chicago

4187 chiefly by ox teams drawing the old Pennsylvania canvas covered wagons. He points out that a stage route between Chicago and Ottawa by way of Plainfield was established by January, 1834; by 1838 or 1839 the route was changed so as to go from Ottawa to Chicago directly up the west side of the river. That is, of the Illinois and Desplaines, leaving Plainfield out in the cold. That it was a tedious ride from Joliet to Chicago, requiring a day, sometimes considerable of the night.

In view of this, it is my opinion it is not to be believed that all this time the river was navigable for boats carrying 14 tons of grain in addition to the hams and the parties navigating the boats, and used for farm produce generally as one would infer from the statement in Woodruff, page 607.

If this was being done, and so practicable, the question arises why the tedious trip along the river banks by stage coach and why were the goods from Chicago brought chiefly overland to Joliet in wagons?

4188 COUNSEL FOR COMPLAINANT. I admit as to the passage beginning on transcript page 341 (Abst., 159), which reads: "At present, small steamers owned by Messrs. Small, of Wilmington, and Stephen F. Hanford, of Warner's Landing, ply regularly between these points and Chicago"—that these steamers made use of the aqueduct and the Illinois and Michigan canal and did not enter the Desplaines river, except where the Illinois and Michigan canal was coincident with the river at Joliet in the upper and lower basins. The very point is made in the deposition of Mr. W. W. Stephens which we have already offered in this case. I do not admit that the balance of the passage read from Woodruff's History does not apply to the Desplaines. We contend that it does.

4189 The WITNESS (continuing): Coming now to the question of cartography. The standard map makers of the early period never visited America. They relied on reports of those who had done so. Explorers were often confused as to the geography of the region they traversed, and sometimes resorted to conjecture or theory to piece out their actual observations, which conjecture and confusion is reflected in the maps of the early period. Cartographers sometimes resorted to conjecture when the explorer had not. Bellin, 4190 one of the better French map makers of his time followed out certain notions he had conceived of the hydrography of the region in question, in 1755 connected Lake Winnipeg with the Mississippi river by a channel which he called the Riviere Rouge. He provided waterways leading from Lake Winnepeg into Hudson Bay and to the "Sea of the West." In this connection, I cite Winsor, Mississippi Basin, pages 204 to 206, and Bellin's Map of North America, 1755. No. 23 of the Chicago Historical Society Library Collections.

Which said map was thereupon offered in evidence.

(For copy of said Exhibit see Appendix, page)

The same error was copied by the English geographer, John Rocque, in a map published as late as 1761, No. 28, C. H. S. Collections. (See Trans., 4205; Abst., 1584. This map shows the Chicago river quite accurately, while for the Desplaines is shown an insignificant and un-named stream lying a considerable distance to the southwest of Chicago.

4191 A passage from the Illinois to Lake Michigan by this route would necessitate a portage of a good many miles.

4192 An instance of wrong interpretation by map makers of the reports of explorers is furnished by Winsor. "Mississippi Basin," page 78 (reading):

"It shows how diverse interpretations could be put upon the same reports, when Delisle is always correct in making the Ohio and Wabash confluent streams, while DeFer puts them down as parallel affluents of the Mississippi."

Delisle and DeFer are the same persons who have been referred to by complainant's witnesses. Delisle was one of the greatest cartographers of his day, noted for his carefulness and insight; yet an error of his which later caused much international trouble will show how the best and most conscientious map maker could be led astray. In his map of 1703 (No. 12, C. H. S. Coll.), of the upper Mississippi river, he relied on the reports of Duluth, Perrot and LeSeur, who gathered their information from the Indians. He put the source of the Mississippi in latitude 49 degrees, which error was retained by map makers for almost a century, and led the negotiations of the Treaty of 1783 astray, necessitating another treaty between United States and Great Britain to straighten out our northwestern boundary.

Whereupon said map was offered in evidence.

(For copy of said exhibit see appendix, page)

The error was repeated by DeFer (for copy of said map see appendix, page), and improved upon by other contemporary cartographers who carried the source of the Mississippi as high as 54 or 55 degrees. Winsor says, Mississippi Basin, page 78:

"They had about as little warrant for this as the French traders wandering among the Upper Sioux had when they detected Chinese sounds in the savage gutterals."

The backward state of geographical knowledge of America, is shown by a statement of William Douglass, made in 1729, to the effect that there was not a map of New England in existence but what was intolerably and grossly erroneous.

Douglass lived at Boston, wrote a series of letters to Cadwalader Colden of New York, between 1720 and 1736. 4194 "Collections of the Massachusetts Historical Society.

Vol. II. Of the Fourth Series. Boston: Published For The Society, by Crosby, Nichols and Company, 1854." This

is one of the old and important historical societies of America, numbering in its membership many of America's leading historians, among them, Justin Winsor. The letters reveal a writer of intelligence, scholarly, of scientific tastes and insight. He writes, September 14, 1729, of Colden's project of making a map of North America, and proffers suggestions as to method of procedure. He says, pages 185-186 of the volume (reading):

"It is with pleasure I understand that you incline to oblige the World with a correct map of North America. I am sorry that it is not in my power to contribute towards it by sending you a good map of the Provinces of New England; there is not one extant but what is intolerably and grossly erroneous. I have at times (with a design of learning the country) travelled the
4195 greatest part of our four Colonies of Massachusetts Bay, Connecticut, Rhode Island, and New Hampshire, but cannot pretend to reduce them to an exact plan; I may however send you some hints which may enable you to make the maps far more exact than any hitherto published."

I observe that if such was the state of things in New England, which had been settled for over a century, how much was likely to be known in Europe of the geographical details of the Illinois country and the Chicago-Desplaines route.

Delisle, the French cartographer, in a map dated 1700, represents the Wisconsin river as one continuous waterway, connecting Green Bay with the Mississippi. This was 27 years after Marquette and Joliet's expedition, and many another French explorer had doubtless in the meantime gone between Green Bay and the Mississippi.

Delisle's map of 1703 shows the present Chicago river quite accurately so far as the south branch is concerned with the modern name applied.

4196 The Desplaines does not appear on the map. The Illinois runs a considerable distance to the south of Lake Michigan, so that a passage from the Illinois to the lake would necessitate a considerable portage to approximately the mouth of the modern Desplaines. The Wabash and Ohio appear as one and the same river. Delisle's map of June, 1718, represents the Chicago and the Desplaines with considerable accuracy. Extends the source of the Kankakee too far to the northeast; represents the Rock river as flowing due

west to its mouth, and puts the name "Chicagou" on Desplaines river, the modern Chicago river being represented, but unnamed.

Whereupon counsel for Defendant requested that the record show the fact that each and all the maps as referred to by the witness were present, and presented to and referred to by counsel for complainant.

As late as 1755, Vander Aa, a Dutch cartographer, undertook to combine the features of these various maps by Delisle. He shows the Fox-Wisconsin as one continuous water route, and gives it the name belonging to the first river, the Reynolds. This map is found in Winsor, page 424-425. It 4197 also shows the river Longue of LaHontan. Old errors died hard with cartographers.

Whereupon said map was offered in evidence.

(For copy of said Exhibit see Appendix, page)

A map by Janvier in 1762 repeats Delisle's mistake of 1700 in representing one continuous waterway connecting Green Bay with the Mississippi. Map shows both North America and South America, and does not go into much detail. It is No. 29, of the C. H. S. Collections.

Whereupon said map was offered in evidence.

(For copy of Exhibit see Appendix, page)

Janvier is a more detailed map of North America in 1755, represents this feature with a fair degree of accuracy. C. H. S. map, No. 29, is small and drawn on a small scale.

4198 COUNSEL FOR COMPLAINANT. Our objection to this as incompetent, irrelevant and immaterial, applies to all these maps, especially in view of the fact that they are not offered in evidence.

COUNSEL FOR DEFENDANT. Then we may cumber the record with them after all.

4199 The WITNESS (continuing). At transcript page 4181 (Abst., 1576). I spoke of the selections referred to as written by Justin Winsor, which was not strictly correct. One was written by Winsor, and the other by Andrew McFarland Davis, of the American Antiquarian Society. It does not change my testimony materially, as complainant's witnesses have shown, transcript p. 352 (Abst., 165) that Winsor had general oversight of the whole work which was issued under his authority.

4200 Returning to the subject of cartography: Gerard Von Keulen's map, of 1720, Amsterdam, shows the Illinois river rising in what now constitutes either the region of

southeastern Michigan or northeastern Indiana. The Chicagou is a branch of the Illinois lying in northern Indiana, while to the east and southeast of Lake Michigan Chicagou, a place, is located approximately in the vicinity of the modern Ft. Wayne. There is also a river unnamed but corresponding to some extent at least with the modern Chicago river, this being near the southern end of Lake Michigan on the western side, flowing apparently almost due north; the forks, the point where the two branches of the Chicago river come together, being placed a considerable distance from the lake. There is an Indian village indicated here, and the 4201 name *les Checagou*. The words appear approximately at a point to the southwest of Lake Michigan, the letters stretching across the map for some little distance, and the end of the word *Checagou* being about the middle point from east to west at the southern end of Lake Michigan.

A stream which may be taken as standing for the modern Desplaines is shown on the map, flowing in a general southeasterly rather than southwesterly direction, more to the south than to the east, however.

On the river of the Illinois, which is designated by the French name, at a point almost due south of the village which is labeled "*les Checagou*," and at the branch of the river which I take to correspond to the modern Chicago river, is found, "*The lac ou Isle Pimetoui*" corresponding as I take it to the modern lake Peoria; on this lake is indicated a fort designated "*Fort Lewis, formerly called Fort Creve-coeur*." The French inscription as it stands on the fort: "*Fort Louis Appele cy davant, or devant*"—"Fort Creve Couer."

The map maker evidently considered Fort Louis and Fort Creve Couer as being one and the same fort. Somewhat to the north of the western side of Lake Michigan another river is labeled, "*Riv. Chokagou*." I note the portage between the Fox and Wisconsin rivers, using those names in the modern sense. Also a portage between the river labeled "*de Checagou*" and located, as I pointed out somewhere in northern Indiana; and another stream which evidently stands for the Wabash, the portage being labeled: "*Portage Pour Entre dans Ouabache*."

4203 A portage labeled "*Portage de St. Jerome, or Jerome*" connects with the stream running into Lake Erie. The river indicated as the Miamis flowing in a northwesterly

direction empties into Lake Michigan a considerable distance above the southern end on the eastern side, where a fort is indicated by the inscription: "Fort de Miamis." In a general way this river corresponds with the modern St. Joseph.

The portage labeled "Portage de Miamis" appears between the source of this river and the western end of Lake Erie.

4204 There is no portage marked between the Illinois or the stream flowing southeast that I have pointed out may have been intended for the Desplaines, and Lake Michigan. The dotted line which I cannot explain, runs generally all over the map. Evidently it does not indicate a portage. A portion of the dotted line begins on the Mississippi and runs north of the Illinois, and reaches Lake Michigan at the little stream running into Lake Michigan, and generally corresponding to the Chicago river. The stream flows into what is apparently the Mississippi, called the River St. Louis or Mississippi, which is marked "The River of the Wabash," or the French for that; that is apparently the Ohio.

4205 There was a time when the relation between the Wabash and the Ohio rivers was very much confused in the minds of cartographers. I presume, the southernmost of the two streams shown here which is labeled, River of Ouabachs or Akansea Sepi, should be taken for the Ohio. South of the southernmost of those rivers I find a river having upon it Petit Villages des Chicachas.

Whereupon said Von Keulen map of 1720 was offered in evidence. (For copy of said Exhibit, see appendix, page)

John Rocque's map of apparently 1761, No. 28 C. H. S. Collection has Fort Checagou on a river approximately where the modern city is. The river is unnamed. The Illinois river lies far to the south of Lake Michigan. What apparently corresponds to the modern Desplaines appears as a rudimentary stream rising a considerable distance to the southwest of the extreme southern end of Lake Michigan. The passage from what I take to be the Chicago river to the Illinois would necessitate a portage of a good many miles.

4206 "Fort Checagou" lies to the west of the southern end of Lake Michigan; the last letter ending approximately where the beginning of the north branch of this river appears. What I take to be the designation of the fort, lies to the south and east of the mouth of the stream, which with reference to the lake itself would be immediately to the south

of a line drawn north and south through the western portion of Lake Michigan. The mark which appears opposite the word "Fort Checagou" is the same designation or mark which appears opposite Fort Detroit and Fort St. Joseph. The western side of Lake Michigan is not a straight line as 4207 shown on this map. My statement as to the line drawn north and south is an effort on my part to indicate approximately the location of this character which seems to designate the fort.

Whereupon said map was offered in evidence.

(For copy of said Exhibits, see appendix, page)

The following maps among others, indicate the Chicago river at another place than the modern Chicago river. Delisle's map of 1718, being No. 15 of the C. H. S. Collections, indicates the Desplaines as the Chicago.

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

Danville's map of 1755, being number 22 of the C. H. S. Collections, the same indication.

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

This was reproduced in 1756 by the heirs of Homann, being No. 27 C. H. S. Collections.

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

No. 30 of the C. H. S. Collections, the date of which the cataloguer apparently has put as 1763, designates what I take to be the modern Desplaines river, the Illinois or Chicagou R.

4208 This map cannot be earlier than 1763 and is by Eman Bowen, Geographer to his Majesty, and John Gibson, engraver.

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

Sr. le Rouge' map of 1755, labeled "Canada et Lousiane" shows what I take to be the modern Desplaines with the designation "Chicagou R."

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

Sr. D'Anville's map of North America which indicates it was published in 1746, or later, I suggest that it is based on one originally published in 1746, and has been corrected or added to in certain respects. It shows at the southwestern corner of Lake Michigan, what may be probably fairly taken

as representing the modern Chicago river; further, a river flowing into the Illinois which apparently stands for the Desplaines, which is labeled "R. de Chicagou."

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

In Adair's History of the American Indians is printed a map which Winsor has reproduced in his Mississippi Basin, pages 262-263. I find the designation Chicagou R. on a 4209 river I take to stand for the modern Desplaines, though have made no careful study of it. This map in this particular portion seems to resemble the one just cited, D'Anville's map of 1746.

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

"The United States of North America with the British Territories and those of Spain, according to the Treaty of 1784, engraved by William Faden, 1796" shows a river corresponding with a fair degree of accuracy to the modern Chicago river, with no name indicated. Written in the southern end of Lake Michigan apparently as intended to apply to the mouth of this river, is the name Chikagou. I suppose this is intended as a place designation, though there is nothing further to indicate what the map maker's intent was. To the west and southwest of Lake Michigan is a river I take to be the same as the modern Desplaines, labeled "Chikagou R."

4210 There are portages on the map, though none is shown at Chicago. There is one near the source of the St. Joseph river, also near the source of the Kankakee and Wabash, is the word "portage," which applies to the portage between the St. Joseph and the Kankakee; possibly, to a portage between the St. Joseph and the Wabash.

A portage appears between what is labeled R. Miami of the lake and the Wabash river. There is a portage between the G. Miami river and a northeasterly flowing unnamed river that enters Lake Erie near its western end on the southern side. It is designated "Portage eight miles." Another

4211 portage in that vicinity, I am not certain between what rivers, is labeled "Portage nine miles." There is a portage between what is designated as the Copper Mine branch of the river St. Croix, and a river flowing into Lake Superior near the western end on the southern side labeled Godard R.

4212 I see no portage at the Fox-Wisconsin. All but one of these maps belong to the Chicago Historical Society Library. Eaden's map just introduced or referred to belongs to the Lewis Institute library.

Whereupon said Eaden's map of 1796 was offered in evidence.

(For copy of said Exhibit, see appendix, page)

I next refer to Homann's map entitled, "Amplissimae Regionis Mississippi," etc., date uncertain. Winsor in his Narrative and Critical History, Vol. 5, page 81, puts the date as about 1730. A stream I take to correspond to Modern Desplaines, labeled "Chicago River." The word printed in the Lake Michigan near the southern end, I read "Chigagou." Do not know what its further significance may be. I see no portage between the stream labeled "Chicago River" and the stream appearing where the Chicago now is.

4213 A portage appears between the head of the Illinois river and a river to the east that runs into Lake Erie, which I would consider, though apparently being between the headwaters of these two rivers.

There is another portage apparently between the same streams. The portage that appears between the streams at the southeastern part of Lake Michigan ("The Lake of the Illinois") and the Illinois river. There is an indication of a portage between the Fox and the Wisconsin, and another at the eastern end of Lake Erie and some stream south of it.

Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, page)

4214 According to Winsor, Mississippi Basin, pages 271-274, the London Magazine published a map in February, 1760, which represents the Ohio river as the Mississippi river. Page 271 (reading):

"Note. The map on the two following pages is from the London Magazine, Feb. 1760. It was engraved by T. Kitchen, 'from an Indian draught.' The river called the 'Mississippi is really the Ohio, and its two affluents are the Tennessee ('a branch of the Mississippi') and the Cumberland (Cherokees or Hogogheg-wee R.). It illustrates an account of Gov. Littleton's expedition brought 'by the last ship from South Carolina.' "

The English map makers were less well informed than the French. Winsor expresses this, Mississippi Basin, page 163, where he shows that Colden

“hoped by this publication (New York, 1727) to instruct those English statesmen who had shown supreme ignorance of American geography, in contrast to the enlightened apprehensions of their French rivals. The difference between them was naturally much the same as that which Delisle with his care, and Senex and Moll with their wild conjectures, had made manifest in their respective maps.

- 4215 There seemed sometimes in this application of intellectual discernment in American matters, a predetermined purpose on the part of the insular English to go wrong if possible.”

It was agreed between counsel, that counsel for the government may reserve its right to object to the use of any of these maps, or any testimony based on them, until it had the opportunity to go over them and check them up.

- 4216 The WITNESS (continuing). Having examined the DeFer map referred to by Alvord, transcript p. 120 (Abst., 52), where he said DeFer was one of the best cartographers of his day, and one of the early geographers to work out details of western maps. DeFer was not superior to Delisle, if indeed his equal, yet, DeLisle in his map of 1703 (See Trans., 4192; Abst., 1580; Appendix), No. 12 of C. H. S. Collections, shows the Illinois river as reaching far around the source of the St. Joseph, with no Desplaines indicated. The portage from Chicago to the Illinois would therefore have a length of many miles according to this map.

- 4217 DeFer had no better reports than Delisle and probably knew no more about the region in question. That DeFer is sometimes led astray is shown by the fact that he adopted the Long River story of Lahontan, published in 1703; that he represented the Wabash and Ohio rivers as parallel, affluent streams flowing into the Mississippi while Delisle, according to Winsor, using the same reports, represented them correctly. DeFer's map, transcript p. 120 (Abst., 52; Appendix,), represented inaccurately the geographical features at the southern end of Lake Michigan. I conclude it is improbable that DeFer in 1705 knew anything more detailed

or definite about the Illinois-Chicago route than did Delisle.

4218 Having examined the map entitled "Carte Particuliere du Fleuve Saint Louis," referred to by Alvord, transcript p. 118 (Abst., 51; Appendix,), stating that it does not indicate on its face either the date or the person who made it, but from general knowledge of maps of this time, must have been made about the year 1700 or before. This map was printed in the Atlas of H. A. Chatelain, the title page being:

"Atlas historique, ou Nouvelle introduction a l'histoire, a la Chronologie & a la geographie ancienne & moderne * * * par mr. C. * * * (anon) avec des dissertations sur l'histoire de chaque etat, par m. (Nicolas) Gueudeville. 7 v. fol. Amsterdam, F. l'Honore & Chatelain, 1705-20."

The second edition of this atlas was published, as shown by Phillip's list of atlases between 1732 and 1739. The particular volume in which this map occurs was first published in 1719, and the second edition in 1732.

4219 Complainant's witness not far astray in location of map in point of time, for the map on which this is based is Lahontan's map of 1703, in Thwaites' Lahontan, Volume 1, opposite page 156 (Abst., 382; Appendix). I say it is based on that map because of evident similarity of the two maps, which ocular examination of the two maps shows fully.

4220 The boundaries of the country included in the two maps practically the same. The water connection between Lake Superior and Lake Winnipeg, which does not in fact exist, is shown on the two maps in practically the same manner. The Lahontan map, as published, is in English. The inscriptions are in English. The names and other inscriptions on the carte particuliere are the same or French translations of the names appearing on the Lahontan map of 1703. Have not verified this with respect to every name but did so to sufficient extent to lead to the conclusion stated. I call attention to the inscription of the Lahontan map placed below the Illinois river and extending out in the direction of Lake Erie, which reads:

"This faint line represents the way that the Illinois marched through this tract of land to make war against the Iroquois, the same being the passage of the Iro-

quois in their incursions upon the other savages as far as the Mississippi."

- 4221 Turning to the carte particuliere, I find in French a translation of the same inscription, which reads (reading):

"Ces limites sont justement la route que les ilinois oumamis et autres sauvages tiennent allant faire la guerre aux yroquois par terre, de meme celle que les yroquois suivent pour aller porter la guerre ches les nations sauvages les plus eloignees jusque au de la du Missisipi."

As to the portion of this map pertinent to the nature of the water connection between the lower end of Lake Michigan and Mississippi, the representation of the Illinois river on the two maps is so similar as to make it unquestionable that one is a copy of the other. The representation of the lower end of Lake Michigan not exactly the same on the two maps, but difference insufficient to lead me to question conclusion stated.

- 4222 On Lahontan's map is the inscription "Land carriage of Chekakou," applying evidently to the point or points of map between northernmost point of the Illinois river and southernmost point of Lake Michigan or Ilinese Lake as it is called.

On carte particuliere occurs the inscription "Portage y des Ilinois," evidently in the same place, applying to the same feature. On both maps, Illinois river ends at a point to the south of the eastern side of Lake Michigan, in what I take to indicate a lake; and the St. Joseph river on both maps alike rises not far from this point last mentioned, also in a lake, and flows approximately due north, although the course of river is not straight, to Lake Michigan. Between the two lakes the source of the Illinois and source of St. Joseph on each of the maps is a cross which I take to indicate a portage, although there is no inscription at this point. The place names along the St. Joseph river are so similar on the two maps as to furnish additional evidence to my mind that the Carte Particuliere is but a copy of the Lahontan map.

- 4223 I note on the map itself the indication Tom VI., No. 21, page 90. I turn to Philips' list of geographical atlases in the Library of Congress, which reads (reading):

"Library of Congress. A list of Geographical Atlases in the Library of Congress with bibliographical notes.

Compiled under direction of Philip Lee Phillips, F. R. G. S. Chief, Division of maps and charts. Volume 1, Atlases. Washington, Government printing office, 1909."

This volume is put out by the Library of Congress and undertakes to describe and indicate maps and atlases contained in the Library of Congress. This volume indicates a list of geographical atlases in that library. On page 305, is an 4224 account of the atlas of H. A. Chatelain, the title of which has been read, and in a list of maps pertaining to America, Volume 6, No. 21, * * * Fleuve Saint Louis. * * *

At page 326, of this atlas under the designation, "The following maps relate to America," I find "Volume 6, No. 21, Carte Particuliere du fleuve Saint Louis"; this is the evidence on which my conclusion as to the identity of this map rests.

4225 My understanding is that this publication is regarded by scholars and historians as being entitled to great credit on the score of its reliability. In my judgment this particular map which has been introduced by complainant is entitled to no greater weight than the map of Lahontan, whose journey is rejected by the complainant.

Taking up the map entitled "De Lamare Karte van Den Seen in Canada" referred to by Alvord at transcript, p. 154, (Abst., 66; Appendix _____), I am unable to find any reference to De Lamare in Winsor's Narrative and Critical History, or his other works, so base my remarks on what appears in the record. A map appearing under such auspices, and from such sources as the record shows it to have been derived from, is of little or no value as historical evidence.

4226 It purports, the record shows, to be based on French maps. We have French maps introduced into the case, and it adds nothing to the strength of the historical argument to add German maps based upon them which may or may not have been made intelligently. If made intelligently, would only repeat representations of French maps. The Carte Particuliere, just under discussion, serves as an example of the danger of reliance on anonymous maps.

I have examined Moll's map of 1729, entitled: "A New Map of ye North Part of America Claimed by France under ye Names of Louisiana, Mississippi, Canada & New France with the adjoining territories of England & Spain. By H. Moll, Geographer. 1729," referred to by Alvord at transcript, page 138 (Abst., 60; Appendix, _____), who said:

"Moll was in fact regarded in his day as an authority in Cartography. He was in constant touch with the Board of Trade, and used the papers of the Board of Trade for the purposes of obtaining information from which he could make his maps. He also was familiar with the French maps."

4227 Moll was a Dutchman who came to England in 1681 and became the Royal Geographer and produced many maps and charts, among others his Atlas Minor of sixty-two maps, which the Government has just offered as being offered by complainant. I base my conclusions upon it. The Atlas

Minor was first published in 1729. There were later editions. I conclude this is the edition of 1732.

4228 As to Moll's authority, he had access to the Board of Trade and other governmental reports, but he seemed to have been very credulous in temperament, and this credulity often led him into error. I base this conclusion upon statements made by Justin Winsor in his "Mississippi Basin," page 80, the citation headed La Hontan, 1703, dealing with La Hontan's discoveries or pretended discoveries (reading):

"The most distinct of these stories were found in a book which Lahontan published at The Hague, in 1703. This story-teller claimed that some fifteen years before he had found a stream entering the Mississippi near Lake Pepin, which came from the setting sun. By following its sluggish current he had come to a large lake lying beneath the mountains, and beyond these highlands there were the sources of another river, which could be followed to the Pacific. The statement was specific and gained credence and the wonders of it had doubtless something to do with causing the multifarious publications of the book in French, English, and German, which was put upon the market at the Hague, in London, Hamburg, Amsterdam, and Leipzig, for the next eight or ten years. For a while the story prospered, and gained a qualified assent from De Fer. Delisle was inclined to believe it, but at a later day, importuned to discard it, he yielded to the arguments of Bobe again. 4230 it. Homann, in 1706, put this 'Riviere longue' on his map. The English cartographers, Moll and Senex, gave it full play in their maps, though Senex finally rejected it."

And again on page 104 of the same volume, the citation being headed "Maps of Louisiana" (reading):

"There was no lack of general interest in these measures, and one finds occasionally in cartographical collections a 'Cours du Mississippi ou Saint Louis,' as the map was called, prepared in 1718, to abet the fever, at the command of the company, by a leading geographer, Nicolas de Fer. Across the English Channel there was an echoing furor, and an old plate of John Senex's 'Map of North America' was revamped to meet the demand for information about the new El Dorado. It was inscribed to Law. Herman Moll, the rising English cartographer, inserted (1720) in his map a legend athwart the trans-Mississippi region, saying that 'This country is full of mines.' At a later day, 1755, Mitchell, in his great map made in the English interests when the final struggle was impending, recalled the fever in the legend: 'Mines of Marameg,' which gave rise to the famous Mississippi scheme, 1719."

The map I have before me, the Atlas Minor being the edition of 1732, there appears in the region Winsor has just been discussing to the west of the Mississippi and 4231 roughly opposite the mouth of the Wabash or Ohio river, the inscription, "Country full of Mines."

I turn to Winsor, chapter 6, page 111, entitled, "The Barriers of Louisiana. 1710-1720," the paragraph being, "Lahontan and a passage to the Western Sea" (reading):

"If La Harpe and St. Denis had failed in finding in the southwest an overland way to the South Sea, there was a vague hope that it might yet be revealed in the northwest. If Lahontan's story of his Riviere Longue was not generally discredited, since Delisle, the leading geographer of France, had pronounced against it, there were, however, still a few credulous cartographers, like Homann of Nuremberg, and Moll the English map-maker, who placed it on their maps. The common opinion among those interested in this problem of a western way to the Pacific pointed rather to the Missouri, or perhaps to some way from Lake Superior by a higher latitude."

On this map in the Atlas Minor the Long river of Lahontan is represented with indication of the names of some of the tribes which Lahontan set down and which his-
4232 torians, generally, agree to have been purely fictitious, and a further indication of Lahontan's limit of discov-

ery. I now read from Winsor's "Mississippi Basin," page 123, the paragraph headed "Coldon and the Indian Trade," through another headed "English Lack of Discernment" (reading):

4233 "Settlements which the Dutch had formed on the Hudson, and the intercourse which that people had wisely regulated with the neighboring Indians, had come by the transition of power into the hands of those who fully comprehended the nature of their inheritance. No one among the supplanting English knew it better than Cadwallader Colden. He spoke of New York as 'The only province that can rival and I believe outdo the French' in the Indian trade; and trade was on the whole the most important influence now at work in the struggle for a continent. In a pamphlet which Colden had published in 1724, on the encouragement of the Indian trade, he had urged the occupation of the country south of the Great Lakes. It was partly to aid such encouragement, and at the same time to make manifest how the Five Nations could be helpful in such schemes, that he set about preparing a history of those tribes. He hoped by this publication (New York, 1727), to instruct those English statesmen who had shown supreme ignorance of American geography, in contrast to the enlightened apprehensions of their French rivals. The difference between them was naturally much the same as that which Delisle with his care, and Senex and Moll with their wild conjectures, had made manifest in their respective maps. There seemed sometimes in this application of intellectual discernment in American matters a predetermined purpose on the part of the insular English to go wrong if possible. When they reprinted Colden's book, in London, in 1747, and in 1750, the text was so perverted as to convey on some points little conception of what the author had written."

Concerning this ignorance on the part of the British to which the citation just concluded refers, I call attention to John G. Shea's introduction to Colden's History of the Five Indian Nations; the title page (reading):

4234 "This History of the Five Indian Nations depending on the Province of New York, by Cadwallader Colden. Reprinted exactly from Bradford's New York Edition, (1727). With an Introduction and Notes, by John Gil-

mary Shea. New York: T. H. Morrell, 134 Fulton street, 1866."

This is an exact reprint of the work of Cadwallader Colden, first published in 1727, which was under discussion by Winsor in the citation just read. Page X (Roman notation) (reading):

4235 "To lay more completely before the public the importance of the Five Nations or Iroquois to the Colony of New York, as a barrier against the French and a means of controlling the West, Colden drew up his remarkable History of the Five Nations. Such a work was necessary when London merchants could assert to the King that the Five Nations lay so far from New York that French Indians lay between: And when they boldly declared before the Board of Trade that the Five Nations 'were two or three hundred leagues distant from Albany, and that they could not come to trade with the English but by going down the River St. Lawrence, and from thence through a lake, which brought them within eighteen leagues of Albany.

This was before the days when a British minister discovered that Cape Breton was an island, and a short historical sketch of the Iroquois or Five Nations and their relations with the French of Canada on the one hand, and New York on the other, was needed to teach King and Council, Lords of Trade and other ruling powers, that the Mohawks lived on the Mohawk, within a day's journey of Albany, as well as to enlighten them on the real position, influence and power of that confederacy. Years after Colden alluded to the ignorance of British statesmen, contrasting it with the extensive information possessed and constantly increased by the French."

These citations from Winsor indicate that Moll was credulous and let conjecture take place of knowledge and solid information.

4236 They indicate also that he was under the influence of Lahontan. A comparison of his map with Lahontan's map of 1703, in Thwaites' Edition of Lahontan, Volume I, facing page 156 (Appendix,), reveals the extent of 4237 this influence. Moll still retains the Long river. He calls the Fox, the Paunts R. just as Lahontan did on the map of 1703, although Delisle in his map of 1703 (Appendix,) had labeled it Rivieri des Reynards, and is so named

on VonKeulen's map of 1720 (Appendix,), which is No. 17 of the C. H. S. Collections. The resemblance between place names along this river on the two maps is unmistakable. The St. Joseph river with its place names is practically the same on the two maps, and the Illinois and the region at the southwest end of Lake Michigan, Moll's Illinois river is obviously modeled after that of the Lahontan map.

LaHontan calls the portage the land carriage of Chekakou. Moll on this map calls it the L. carriage Illinese, but on another map of his used LaHontan's exact designation, which map is referred to by Winsor on page 24 of the "Mississippi Basin," where he says (reading):

"What Herman Moll, the English cartographer, called the 'land carriage of Chekakou' is described by James Logan, in a communication which he made in 1718 to the English Board of Trade," etc.

4238 The representation of the portage is virtually the same in the two maps, although the distance indicated by Moll would be slightly greater than that indicated on LaHontan's. In both, the length of the portage would evidently be considerable, for in neither is there any indication of a river corresponding to the modern Desplaines. It is obvious, that Moll's map has no more authority so far as Illinois and the matter of the connection between Lake Michigan and the Illinois river is concerned, than has LaHontans' map of 1703, since Moll in these respects, at least, is evidently but a copy of the former.

Have examined Mitchell's map, entitled, British dominions in North America, with roads, distances, etc., referred to by Alvord at transcript pages 142, 143 and 144 (Abst., 61-62; see Appendix,); concerning the maker of the map, Alvord says that since 1783 in every controversy over the boundary between Canada and the United States reference has been made to John Mitchell's map as being the map that was at that time used to show the boundaries.

4239 Mitchell enjoyed great repute as a map-maker in the 18th century, not due alone to accuracy, but to a very considerable extent to the fact that on the eve of the final struggle between France and England for supremacy in North America, Mitchell gave the fullest expression to the English territorial claims. That goes far to explain the repute of Mitchell's map with the British Government, and to explain why he was referred to frequently in international disputes.

I base my conclusion on Winsor, who is commonly regarded as the master among American historians, of this particular field of work, so have used him largely in connection with my general discussion of the maps of this period. Winsor, 4240 "Mississippi Basin," page 104 (reading):

"At a later day, 1755, Mitchell in his great map made in the English interests when the final struggle was impending, recalled the fever in the legend: 'Mines of Maramek, which gave rise to the famous Mississippi scheme, 1719.'"

I turn to page 234, the subject being "The Anglo-Iroquois Claim" (reading):

"The English had for a time found it more profitable to base other claims, as we have already mentioned and shall more fully explain in another chapter, upon the surrender by the Iroquois of jurisdiction over a vast western country. It is quite uncertain if the Confederates understood this concession as the English did, and the latter claimed that the French had unconditionally recognized this acquired right in the treaty of Utrecht (1713); but the French professed certainly to think otherwise. Colden had set forth this Anglo-Iroquois claim as based on the conquest of the country by the Confederates 'about the year 1666,' when, 'amply 4241 supplied by the English with fire arms, they gave a full swing to their war-like genius and carried their arms as far south as Carolina, and as far west as the river Mississippi, over a vast country, which extended twelve hundred miles in length from north to south, and about six hundred miles in breadth, where they entirely destroyed the whole nations of whom there are no accounts remaining among the English.'

When, in 1755, the English were fairly embarked in their final struggle with France, Mitchell, the geographer, claimed that 'the Six Nations have extended their territory to the River Illinois ever since 1672, when they subdued and incorporated the ancient Chaouanons (Shawnees)' * * * Beside which they exercise a right of conquest over the Illinois and all the Mississippi so far as they extend. This was confirmed by their own claims to possession in 1742 (at the Treaty in Philadelphia), and none have ever thought fit to dispute them."

There is an omission then, not my own omission, but that of the author:

"The Ohio Indians are a mixed tribe of the several Indians of our colonies, settled here under the Six Nations, who have always been in alliance and subject to the English."

Page 330 (reading):

- 4242 "This Iroquois-English claim had distinguished advocates in Colden, Franklin and Pownall, but there was some abatement at times in its pretensions. Sir William Johnson, in 1763, traced the line of this dependent country along the Blue Ridge, back of Virginia, to the head of the Kentucky river, down that current to the Ohio above the Falls; thence to the south end of Lake Michigan; along its eastern shore to Mackinac; and northeast to the Ottawa, and down that river to the St. Lawrence. The right of the English king to such a territory as this dated back, as the English claimed, to an alleged deed of sale in 1701, when the Iroquois ceded these hunting grounds to English jurisdiction, in addition to their ancestral lands. It was, as they claimed, a title supplementing that of their sea-to-sea charters. When the French cited the treaty of Ryswick (1697) as giving them sway over the river basins where they held the mouths, and claimed this as paramount to any rights the Iroquois could bestow, the English fell back on these territorial charters, as the most ancient and valid claim of all.

- 4243 If the English character claims were preposterous, this supplemental one was, in even some part of contemporary opinion, equally impudent and presumptuous. There was by no means an undivided sentiment among the colonists upon this point; and history has few more signal instances of tergiversation than when, at a later date, the English government virtually acknowledged the justice of the French claims in urging the passage (1774) of the Quebec Bill. 'We went to war,' said Townshend, in the debates on this bill, 'calling it Virginia, which you now claim as Canada.'

The French were more unanimous in their view; but it was only gradually that they worked up to a full expression of it. Bellin, the map-maker for Charlevoix, had drawn in his early drafts the limits of New France

more modestly than the French government drew to maintain, and he was soon instructed to fashion his maps to their largest claims. In like manner the earliest English map makers slowly came to the pitch of audacity which the politicians stood for, and Bollar, in 1748 complained that Popple (1732), Keith (1733), Oldmixon (1741), Moll (at several dates), and Bowen (1747), had been recusant to English interests. It was not till Mitchell produced his map in 1755 that the most ardent claimant for English rights was satisfied."

Reading further from Winsor's *Mississippi Basin*, p. 335, from the paragraph entitled "Maps of the Ohio Country" (reading):

4244 "Danville and the other French map makers had been brought to representations that kept Galissonniere's statement true. The English cartographers had done equally well for their side, and Mitchell could be cited to advantage. His Map of the British and French Dominions in North America was based on documents which the English Board of Trade thought best enforced their claim, and the publication, when made, in 1755, was dedicated to their secretary. In an accompanying text the English claim was pushed to its utmost, and every old story was revamped which served to bolster pretensions of the English preceding the French in exploring the country, reviving the antiquated boast that New Englanders had even preceded the French in crossing the Mississippi, and had really furnished the guides for La Salle's discoveries."

The map referred to in this last citation is Mitchell's, which the Government has introduced in this case, and on which my remarks in this connection are based. As complainant's witness has testified, Mitchell was one of the leading cartographers of the 18th century, but the references I cited show, I think, that it was his swallowing the extreme English
4245 claims to territory in the interior of North America that particularly made his work acceptable to the government. They also show that Mitchell in his representations on his map did not confine himself to the established facts.

4246 I now read from Woodruff's article heretofore mentioned by me at transcript, page 4186. (Abst., 1578.)

4247 The volume is entitled, "Forty Years Ago. A Contribution to The Early History of Joliet and Will County. Two Lectures Delivered before the Historical Society of Joliet

by George H. Woodruff, December 17th, 1873, and March 24th, 1874. Published by Jas. Goodspeed. Joliet: Joliet Republican Steam Printing House. 1874." Page 66 (reading):

"The opening of the canal was a new era in the history of this city and vicinity. Hitherto goods had been transported from Chicago chiefly by ox-teams, drawing the old Pennsylvania canvas-covered wagon, generally called 'prairie schooner,' and not inappropriately.

A stage route was established as early as January, 1834, between Chicago and Ottawa, running by Plainfield, or Walker's Grove. Judge Caton informs me that he piloted the company which first went through and established the stations, and that the party suffered greatly
4248 from the intense cold. In 1837, the stage came from Plainfield across to Joliet, and then passed down the river to Ottawa. After a year or two more the route was changed again, going to Chicago directly up this river, on the west side, and leaving Plainfield out in the cold. A tedious ride it used to be, by stage, to Chicago, especially when we went round by Plainfield. Just think of it, you who are so impatient at the hour and a half required now to pass from the one point to the other; an entire day used to be required to make the passage, and sometimes when the roads were bad, considerable of the night, too. I remember when coming back from the East in the fall of 1837, the driver of the stage lost his way in coming across from Plainfield, and wandered about quite a while on the trackless prairie. In those days the arrival of the stage and the mail was the event in our daily life. Frequently there were two or three 'extras' and the capacity of the 'Old American' and the 'Higley House,' and later, of the 'National,' were often taxed to their utmost to supply the 'wheat bread' and 'chicken fixings' which the travelers required, while the regular boarders very often had to take up with 'corn bread and common doings.' When the canal was completed in 1848, of course the day of stages was over, and friend 'Kipp,' and others, had to 'give up the ribbons,' and the day of the Packet Boat and 'Captain Connett' had some,—only to be superseded in its turn, by
4249 the rushing railway train. What devise shall displace the last, who can conjecture?"

Q. Now, Dr. Quaife, I wish you would give us your summary based upon historical sources, which have come to your

attention, of the use of the Desplaines river and of its capability for use as indicated by these historical references?

Objection to conclusions of witness as to capability of use; incompetent, irrelevant and immaterial.

The first record we have of the use of the Illinois-Desplaines river route by white men is in the year 1673, when Joliet and Marquette returned from their exploring expedition by this route. Their records of the actual passage of the river are exceedingly scanty. Joliet on returning to Canada, his documents having been lost, gave out such an oral account of the country he had passed through as to give rise to the impression that it would be an easy matter to cut a channel for boats so as to connect the Great Lakes with the Mississippi by a practical waterway.

Marquette again used the Desplaines route in spring of 1675; gave us scanty report. Then La Salle appeared, 4250 passed up and down Desplaines river route several times. Acquaintance with the country more thorough than Joliet and Marquette's. Came to establish trading posts and colonies, and persevered in the work for several years; Joliet merely passed through once. Marquette shortly before his death, made a second brief visit. La Salle's reports of the country and his doings are, as compared with Joliet, fuller and more explicit, particularly as to Desplaines river route. Took issue squarely with Joliet on question of the feasibility of opening a trade route between Great Lakes and Mississippi by cutting a short canal through the portage between the Chicago and Desplaines rivers. His statements are so explicit and the reasons for his propositions are given so carefully, that if the extent of our knowledge of the subject were measured by the reports of Joliet and La Salle alone, there could be little hesitation in giving preference to the latter's statement about the route in question.

In fact, however, the Illinois country having thus been laid open to the knowledge and use of white men, this knowledge and use have continued down to the present day; and scattered over the period of time that has elapsed since 4251 the discovery, there are reports more or less infrequent of the actual, attempted or proposed use of the Illinois-Desplaines river route by white men for purposes of trade or travel; and later of examinations of the streams in question and of the surrounding region by the surveyors and engineers of one kind or another.

Thus it becomes possible to bring to bear upon the disputed question which originated with Joliet and LaSalle, whatever knowledge concerning it has been accumulated in the course of the 240 years or so that have elapsed. In this summary, however, it is my intention to limit myself more particularly to the period between 1673 and 1840 approximately, and to inquire what historically was the nature of the use of the Desplaines during this period, and whether such use tends to bear out the statements of Joliet or those of La Salle. I shall begin with the consideration of the differences between the two men in the matter of issue.

Joliet passed through the country once rather hurriedly, having made the entire trip from the starting point down the Fox-Wisconsin and Mississippi rivers to the ultimate point reached and back, by way of the Illinois to the conclusion of the trip in about four months. He had little knowledge of the geography of the region he was traversing, except in so far as it came under his own immediate observation. He lost his records, but gave verbal reports and on these are based our

knowledge of what he had to say about the Chicago-4252 Desplaines route. Frontenac seems to have understood from him that one could sail a boat from Lake Michigan to the Mississippi. Dablon, whose report appears the more correct and worthy of credence, represents that this could be done with the cutting of a canal for half a league at the Chicago portage.

La Salle, on the other hand, was in the Illinois country at various times from 1679 to 1683. He undertook to establish a colony 100 miles from Chicago, and did establish a fort there which became the center of his operation, and was occupied by the French for upwards of twenty years. His interest was in developing the trade of this region, and while he looked ultimately to securing a southern outlet for it, he must for a time find such outlet by way of Canada.

In the course of his Illinois career, La Salle passed between Canada and the Illinois country a number of times. He became acquainted therefore with the routes which could be followed, and though he himself came by way of the Great Lakes to the foot of Lake Michigan, and thence either by the St. Joseph-Kankakee, or by way of the Chicago-Desplaines to the Illinois, he became convinced that it would be impracticable to carry on trade between the Illinois country and Canada by such a route or routes, and that a route by way of the Ohio

river and thence to the lower lakes and Canada, was far
4253 more feasible.

In discussing this subject, he is led to take issue with Joliet as to the feasibility of water communication between Lake Michigan and the Illinois, and so to state explicitly what are the hindrances to such a route. The goods brought to Chicago in barges or barks must here be transshipped to canoes, for, in spite of Joliet's assertions only canoes can navigate the Desplaines for a distance of forty leagues, La Salle not using the term Desplaines, of course.

At a later time, evidently, La Salle reverts to this subject, going into a somewhat detailed description of the Chicago portage and route. As to Joliet's statement about a canal of one-quarter of a league, he says this might happen in the spring perhaps, but not in the summer, "because there is no water at all in the river so far as Ft. Louis." Other difficulties are dwelt on. The most important, so far as the
4254 Desplaines is concerned, being that spring floods are so great that he doubts if a vessel could overcome them; and that if this could be done it would avail but for a short time, fifteen or twenty days in the year at the most, after which there is no more water.

With reference to these two accounts, I would observe here that La Salle's account on the whole harmonizes well with our present day knowledge of the characteristics of the Desplaines river, while that of Joliet does not. The statement of Joliet has been found to be untrue,—that a feasible water route for vessels could be had by cutting a canal of a half a league; that is to say, across the short portage between the two rivers. La Salle's statement concerning the fluctuations of the Desplaines are borne out of the whole by others.

I have in mind Graham and Philips' report, Joutel's Journal, Hubbard's account, and I arrive at this conclusion further by a comparison of such accounts as those of St. Cosme, Charlevoix, Schoolcraft, Kennedy, and so forth, on the one hand,
with such accounts as those left by Child, Fonda, and
4255 Marquette on this second expedition, on the other hand.

I don't think Professor Alvord's opinion that La Salle was prejudiced against the Chicago river route and in favor of St. Joseph-Kankakee route by reason of the opposition of the Jesuits is well founded. The reasons for my conclusion are as follows:

In the first place, La Salle actually passed over this route once in January, 1682, and he may possibly have done so an-

other time, that is, in the winter of 1681, when going up the Illinois-Desplaines in search of Tonty.

Secondly, the Jesuit Mission of Marquette was not at Chicago, but was on the Illinois at Kaskaskia. Parkman locates this village as being about seven miles below the site of the present town of Ottawa. That is, virtually the very capital of La Salle's colony; and so I conclude that it is not warrantable statement that La Salle avoided Chicago because the Jesuits were stationed there. It is true that Marquette died and Allouez succeeded him, but it was in the same mission.

Neither Marquette nor Allouez was in Chicago or Kaskaskia from 1679 to 1683, the period of LaSalle's activity in Illinois.

In place of La Salle avoiding the Jesuits, Allouez avoided 4256 La Salle, and as a basis for this conclusion, I cite Shea's footnote to his Charlevoix's History of New France, Volume 3, page 185 (reading):

"Allouez, on the death of Marquette, proceeded to the Kaskaskias,"—this being the name of the Indian village, of course—"in October, 1676, and remained connected with it till 1679; Disc. and Expl. of the Mississippi, pp. 66-77; Relation de la N. F., 1673-9, pp. 121-134. He retired on the approach of LaSalle, who was greatly opposed to him, but returned again in 1684, and was there apparently in 1687 and '89. He died in the West, apparently about Aug. 1690. He belonged to the province of Toulouse, and came to America, July 11, 1658."

I also cite Joutel's Journal, Stiles Edition, page 197, under date of March, 1688, being the account of the return of Joutel's party from the lower Mississippi region (reading):

4257 "I have before observed, that there was a Jesuit, whose name was Dalouex (Here I read the footnote (2) to the effect that this means Allouez), at Fort Lewis, and who had been very much surpriz'd to hear that Monsr. de la Sale was to come in a short Time, being under great Apprehensions on Account of a Conspiracy intended to have been carry'd on, against Monsr. de la Sale's interest. That Father perceiving our Departure was fix'd, mov'd first, and went away foremost, to return to Micilimaquinay, so that they were left without a Priest at Fort Lewis, which was a great Trouble to us, because we were the Occasion of it, and therefore those, who were to remain in the Fort, anticipated the Time, and made their Easter, taking the Advantage of the Presence of F. Anastasius and M. Cavelier."

With reference to this last citation, that this party told the people at Fort Lewis that La Salle was alive and concealed from the people at Fort Lewis the fact of his assassination, which explains the trepidation of Allouez as pointed out in the passage. It was under the impression that La Salle was still alive that he moved to Michilimackinac, in anticipation of his coming. In view of the

light which history throws on the character of La Salle, 4258 I think it is an unreasonable or impossible inference that

he opposed the views of Marquette as to the Desplaines route, and himself went around by the St. Joseph avoiding the Desplaines, simply out of hostility to the Jesuits. All we know about La Salle shows he was an unusually bold and energetic and persevering character.

Before taking up the consideration of the historical evidences of the actual use made of the Desplaines by white men, I will lay down certain general conclusions which I have reached, without attempting here to substantiate them.

The Desplaines fluctuates greatly at different seasons, or as between periods of drouth and periods of copious rainfall. In the period of spring flood, boats of several tons burden might and probably sometimes did pass from Lake Michigan down

the Desplaines and vice versa. The fluctuation ranged 4259 from a depth of six feet or even more to nothing,—the

dry bed of the stream. There were then, times when a canoe might navigate the stream, even though no larger boat could do so. It is not entirely clear how much time of the year the stream was navigable for canoes. La Salle says there was no water at all in the summer, but he appears to imply that canoes could pass down it at other times than the fifteen to twenty day period of spring flood. Cass came up about the middle of July, at a time when from the sources it is evident the river had been raised by recent rains. It is not clear what the exact date of Joliet's and Marquette's first passage in 1673 was, but they started on their trip in June and reached Green Bay in September; so probably they were on the Desplaines late in August or some time in September. On the other hand, Kennedy and Schoolcraft both failed in their attempt, each in August, to navigate the Illinois river even to the Desplaines. It may be noted in this connection, that Kennedy's boat drew three feet of water; Schoolcraft's boat in 1821 was a large canoe which probably drew but a very few inches of water.

Further, it is clear that there was a highway of travel be-

tween Lake Michigan and the Mississippi river by way of the Chicago-Illinois river route. Doubtless the Desplaines was followed between the Chicago and the Illinois when this 4260 was practicable. It is entirely clear to what extent or to what proportion or periods of time this was practicable. Therefore, the many general references to this route as a highway for trade and travel should be interpreted so far as the use of the Desplaines is concerned, in the light of the knowledge which we gain from more detailed accounts of the route, which go into the character of the Desplaines portion, that is, in the light of the reports of those who actually used the Desplaines, or those who refrained from using it, for reasons involving the question of its navigability.

Finally, I would observe that there developed a wrong impression as to the ease of the navigability of the Desplaines; or to put it differently, the facility of water communication between the Mississippi and Lake Michigan by way of the Illinois-Chicago route. It came to be commonly repeated and reputed that such was the case.

4261 I have in mind such sources, and reports, as those of La Salle, Schoolcraft, Tousey, and the experience of the State of Illinois in constructing the Illinois and Michigan Canal.

I classify roughly, for the sake of convenience, the various historical sources bearing on the navigability of the Desplaines, as follows:

First: Accounts of those who used it.

Second: Accounts of those who tried to, or would have used it, but for a belief in or knowledge of the impracticability of this.

Third: Maps. These map be divided into (a) maps made by explorers; and (b) maps made by those who had never been over the route, but based their maps on the information of others.

Fourth: Accounts, which strictly speaking, are secondary, but which may be regarded as source material in the sense that the writers either through contemporary information or otherwise were nearer than we are to the facts concerning the use being made of the Desplaines. Here I have in mind such accounts as those of Imlay, Flint, Hutchins and so forth.

To take up then the consideration of the first of these 4262 classes. Professor Alvord listed eight instances of the actual use of the Desplaines by those passing up the river to Chicago; and six instances of such use by those who

were passing down the river from Chicago, the reference being to the record, page 472. These lists were as follows:

To Chicago: Joliet and Marquette, 1673; Joutel, 1688; Perrault, 1783; Hubbard, 1819; Child, 1821; Tonty, 1680; La Salle, 1681; Fonda, 1825.

From Chicago: Membre, 1682; St. Cosme, 1698; Hubbard, 1818; Marquette, 1675; Heward, 1790; Furman, 1830. But a slight correction there is in order, for Furman's trip was actually made one year before, 1829.

In addition to these I would here list the trip of Cass up the river in 1827; and Marquette's statement about the surgeon who tried and failed to pass up the Desplaines in 1675. And finally, Keating's report of Lieutenant Hopson's trip up the river. I do not mean to imply that Professor Alvord should have listed these, but that for the purposes of my discussion I include these along with those which Professor Alvord listed.

4263 And now I shall enter into an examination of the circumstances attending the use of the river in the cases cited, considering first the passages up the river to Chicago.

First, Joliet and Marquette, 1673. They came up some time in the summer, or possibly the early autumn. They had seven men apparently in two birch bark canoes, with the lightest possible equipment. The Journal gives no details whatever of the passage up the Desplaines, but it does show that to carry their canoes as far as twenty or thirty leagues was not deemed a serious task; and we know from other sources that two men could readily carry such a boat as theirs.

Second: Joutel, 1688. He or his party came up in March. They left Fort Louis the 23rd and reached Chicago the 29th. I would make a correction here in my statement; I should have said they left Fort Louis the 21st of March rather than the 23rd. This was evidently in the time of spring flood, for they had to pull the canoes in water much of the way on account of the swiftness of the current.

Third: Perrault, 1783. He, too, came up in the spring time. He left Cahokia May 4th. He had one barge and one canoe and was to pass by Chicago and rendezvous on Lake Michigan. There are no details whatever of his passage
4264 up the Illinois, and only by inference from the above statement, do we conclude that he used the Desplaines at all.

Fourth: Hubbard, 1819. Here is a clear case of passage

up the Desplaines of loaded boats. It was done in the spring time only, when they could sail across to the Chicago without regard to the channel.

Fifth: Child, 1821. He came up from St. Louis in this year. No month is given. But he says, speaking of the region between the Chicago and the Desplaines evidently, "The whole country was inundated"; and that there was not less than two feet of water all the way across the portage. Evidently, it was the season of spring flood, or at any rate of high flood. He had one canoe, paddled by two men; therefore I infer there were three persons in the canoe.

Sixth: Tonty, 1680. This passage was in the late fall or early winter. They reached the Pottowatomie village farther on, in December. The details as to their passage of the Desplaines are not entirely clear. Somewhere on the trip they abandoned their canoe. Parkman puts this (I refer to the abandonment) on the Desplaines river. I think, however, the sources do not bear him out, but that they indicate rather that they took the canoe to Lake Michigan. But assuming this to have been the case, there are no details to show how long a portage they made. Tonty merely 4265 says, "We made our portage." This we are left to infer from our knowledge of the usual stage of the river at this season. Joutel, Charlevoix, Hubbard, Schoolcraft, Graham and Philips, La Salle, St. Cosme and so forth, indicate that ordinary one must carry the canoe a large portion, if not all the way, from the mouth of the Desplaines to the Chicago.

Seventh: Fonda, 1825. I am under the impression that this journey was more probably made in 1827. I shall list it in 1825, as it appears in the document. He came up in a canoe with several Frenchmen; no month or date is given, that is other than the year. The account merely shows that such a canoe passed up the Desplaines. If so, we may fairly infer from our other sources, either that it was in the spring time or that rains had raised the water higher than usual; or else that they had to portage much of the Desplaines. There being no statement as to this last in the document, one of the two former alternatives seems to me more probably the true one.

Eighth: La Salle, in 1681. This refers to the time when La Salle, returning from Canada, found the Illinois village

sacked; went on down the Illinois river to the Mississippi in search of Tonty, and now returning back up the Illinois passes probably or possibly up the Desplaines. It is not clear how far up the Desplaines he went, his ultimate destination being the fort on the St. Joseph. It is explicitly stated that he went on foot, the river being frozen. This, then, has nothing to do with the question of the use of the river in boats or by boats. It should probably be considered under my second class. I have included it here simply because it is found here in Professor Alvord's classification in the record.

Next, I shall consider in similar fashion the passage down the river from Chicago. First, that of Membre in 1682. Perhaps this might better be designated the passage of La Salle and party in 1682 for this is the account by Father Membre of La Salle's journey down as given in Shea's *Discovery and Exploration of the Mississippi*, page 166, and following.

4267 The document shows then that in January of 1682, La Salle, Tonty and party, went down the Desplaines and further the Illinois, in sledges, the river being frozen. They dragged their canoes eighty leagues on the Seignelay. It is not perfectly clear to my mind, at any rate, whether this means eighty leagues in all from Lake Michigan, or at what point the eighty league statement is reckoning from.

Second: St. Cosme's account, 1698. They passed from the portage to the mouth of the Desplaines or the Kankakee between November 2nd and 11th, having portaged in all fifteen to seventeen and a half leagues of the way; fifteen leagues according to La Source's; seventeen and a half leagues according to my calculations of the various statements made in St. Cosme's account. On the return trip in the spring they did not use the river at all, but walked from approximately the region of Starved Rock.

Third: Marquette, 1675. He went down in March or the first of April, the river being at high flood. He states that the water is twelve feet higher than it was when he was there eighteen months or so before.

Fourth: Furman, 1830, or 1829 as the date should be. With several soldiers he went in a canoe down the Desplaines river in April; was on the Desplaines on April 27.

4268 Fifth: Heward, 1790. The journal shows he went down the Desplaines in a pirogue, May 12th to 15th.

For some reason he changed his canoe for the pirogue,

and he consumed two or three days in going down the stream some forty miles. It was a time of rainy weather.

Sixth: Hubbard, 1818. The date is evidently about October 1st. The passage of the Desplaines is very difficult. From Cache Island, they carried their goods on their backs most of the way; and they had often to put rollers under the boats to pass them along.

Now I have undertaken to sum up still more briefly this which I have just been discussing, and so I shall give a resume of the foregoing.

First, with reference to passages up the Desplaines:

1. Joliet and Marquette, 1673. Summer; probably September; light canoes. No details.

2. Joutel, 1688. March; high water; swift current.

3. Perrault, 1783. Time, May; no details.

4. Hubbard, 1819. Spring flood.

5. Child, 1821. Time of flood. No further indication as to date.

6. Tonty, 1680. November or December. Had trouble in making the passage. No entirely clear whether on foot or in boats.

4269 7. LaSalle, 1681. December to January. Was on foot. May not have come up the river any considerable distance. There is no certainty as to this one way or another.

8. Fonda, 1825. As I have pointed out, I think more likely the date was 1827. No month and details of the trip given.

That is, four, Joutel, Hubbard, Child and Perrault, came up if not in the spring, then in time of high water. Three of these expressly dwell on the flood conditions, the fourth giving no details. Two, Joliet and Fonda, give no month and no details. Two, LaSalle and Tonty, came in the winter. LaSalle on foot, and Tonty possibly so, though this is not clear.

Then I summarize in similar fashion the passages down the Desplaines.

1. Membre, or LaSalle, 1682. January; on sledges, a distance of 80 leagues.

2. St. Cosme, 1698. November; carried goods fifteen leagues along the Desplaines; took eleven days approximately from the Chicago portage to the mouth of the Desplaines.

3. Marquette, 1675. Time, March; condition, high flood. As I have pointed out, possibly this may have been the first

day or two of April. About the close of March at any 4270 rate.

4. Furman, 1829. Time, April; so far as details go, the water was high enough to paddle a canoe down the river.

5. Heward, 1790. Time, May 12th to 15th; rainy weather.

6. Hubbard, 1818. Time, October; much difficulty; carried goods most of the way from Cache Island.

That is, to conclude, three, Marquette, Heward and Furman came in the spring between March and May or from March to May, the water being high. I have just indicated what qualifications, so far as Furman is concerned, this statement is properly subject to. One, Membre or LaSalle, went on the ice with sledges. Two, St. Cosme, and Hubbard, compelled to carry their things a large part of the way. St. Cosme fifteen leagues; Hubbard from Cache Island.

Now to summarize both sets of passages, that is, those pertaining to trips up the river and those pertaining to trips down, the following generalizations result. I think in preparing this summary I have not made allowance for the additional accounts which I have added to Professor Alvord's list, and so I will state the generalization with that qualification in mind.

4271. Q. You mean those that you added?

A. Those that I added as pointed out, to the list that Professor Alvord gave. Total number, 14; total number down, 6; total number up, 8. Total in the spring or time of high water, 7; total number who did not come in boats on the river, either a large part or all of the way, 4, as follows: St. Cosme, Hubbard, and Membre, down; LaSalle, up.

This leaves three, Tonty, Joliet and Fonda, concerning whom details are lacking. One may have navigated the Desplaines but we are not clear as to this. The other two more probably did, but details are wanting.

In the foregoing generalization I have not taken account of my additions to Professor Alvord's classification but here I see I have here taken them into account. To these should be added the trip of Cass up, in 1827. It is clear that he came up the Desplaines in a large canoe, holding a dozen men, without getting out of the boat. This was about the middle of July. It is also clear that rains had raised the river higher than ordinary at this season, for they navigated the boat across the portage and through Mud Lake and spent the night in the boat in Mud

Lake, and according to Hubbard only in very wet season or time of high water would Mud Lake float a boat.

Here, too, should be included the attempt of the surgeon to bring up a canoe load of furs about the first of April, 4272 1675. He failed and gave up the attempt, but from excess rather than from lack of water.

Taking up the second class, excluding LaSalle's trip in January, 1682, which has already been considered in the first classification, I have here then to consider the trips of Charlevoix in 1721, of Kennedy in 1773, and of Schoolcraft in 1821.

Charlevoix planned to use the Chicago-Desplaines route in September, but he gave up the idea, as pointed out in the letter, partly because of a storm on Lake Michigan and for the reason that because of the river being a mere brook, he was led to believe that there was too little water for his canoe.

Kennedy tried to ascend to the head waters of the Illinois in a boat of three feet draft. The time was August. He was compelled to leave the boat some sixty miles below the mouth of the Desplaines. It seems a reasonable inference that there could have been little water in the Desplaines at this particular time.

Schoolcraft's effort was similar to that of Kennedy, except that Schoolcraft's boat, as pointed out, was a large canoe, which presumably drew less water than Kennedy's boat. The time was August, 1821. He ascended the river to Starved

Rock. Here he found the water in places but a few 4273 inches deep and so the party came the rest of the way to

Chicago on horseback. Schoolcraft thus passed up the Desplaines valley and examined the situation with reference to the proposed canal. As a result of his observations on this expedition, these observations having already been read into the record I merely refer to them, he came to the conclusion that the short canal commonly talked of was impracticable; that one of thirty miles or longer would be necessary to provide a waterway from Lake Michigan to the Illinois and the Mississippi.

With these sources I would group also the letter of Tousey. He came to Chicago imbued with impressions favorable to the canal. He went down the Desplaines on horseback, and as a result of his observations, was led to conclude that the project of the canal would be of greater difficulty and magnitude than he and the public generally had supposed. The water was uncommonly high at the time of this visit.

I should say by way of explanation that I do not mean to

imply that Tousey had any intention of navigating the Desplaines, but that I class him here and discuss his account here for another reason.

To summarize these four sources: Two, in August, Kennedy and Schoolcraft, found it impracticable to navigate the Desplaines. One, in September, Charlevoix, adopted 4274 another route because of information which he relied upon that the river had not water enough to float his canoe. Two, Tousey and Schoolcraft, after traversing the route on horseback, expressed the opinion that the common belief in the feasibility of the short canal was erroneous. One says it will be attended with a much greater expense to open. The other that a canal to Mount Joliet or even much further is necessary.

Concerning my third group, the maps, I shall comment briefly only upon the two subdivisions, in order. First, those made by explorers. These alone would rank in the strictest sense as first grade sources comparable to the oral accounts of explorers, in so far as a map can be understood and legitimately interpreted. Of such maps I have in mind three; Joliet's, Hennepin's and LaHontan's. Joliet's map agrees with his verbal accounts. These have been considered, and so I will make no comment on the map further than it seems to testify, I suppose this would be a reasonable interpretation, to the navigability of the Desplaines.

I might stop here to point out that I am using the word "navigable" and the term "navigability" in the sense of passing a boat in the water along the river.

The others also harmonize with the verbal accounts 4275 given by their authors. Like these verbal accounts, the maps have been assailed on the ground of the untrustworthiness of the author. Hennepin represented the Desplaines as not navigable, agreeing closely with LaSalle in his account. LaHontan reports a portage of twelve leagues, the obvious inference being that the Desplaines was not navigable so far as his experience went. Then to consider those maps made by men who depended entirely upon reports, verbal or written, of others.

These maps really belong in the same class as to authority, with the various compilations, and second hand statements which have been introduced into the record; and for a discussion of them I would refer, and for my conclusions concerning them, I would refer to my discussion already put into the

record on the subject of cartography, and of the specific maps which I have taken up.

With reference to Class Four, which includes far the larger number of references introduced by the United States, I would point out merely the following:

These accounts are all worthy of consideration for the possible light they may shed on the question of the use of the Desplaines. All should be subjected to careful scrutiny to determine, so far as possible, what validity they really possess. What the sources of the authors' information may 4276 have been; how carefully they made use of these sources; what inferences or deductions may reasonably be drawn from these accounts, and in general, whatever tests the critical historian is in the habit of applying to sources in the course of his work. When general statements as to the use of the Chicago-Illinois route are made, and this point perhaps I have sufficiently made already, one must attempt to interpret them in order to arrive at a conclusion as to their bearing on the Desplaines.

As I have already pointed out, I think it is proper, where necessary, to bring to bear upon this interpretation the knowledge gained from the more detailed accounts. Those which I have grouped under class one are the ones I have here in mind; and from the existing conditions with reference to the Desplaines river route.

Motion to strike out conclusions of the witness on the ground that witness states that his point is the capacity of Desplaines in its natural state for use for commercial purposes, which is a question for the court.

The WITNESS (continuing): I have examined the conclusions drawn by complainant's witnesses as to actual use made of the Desplaines river in carrying on trade and commerce as shown by these historical sources. Directing 4277 my attention first to the conclusion reached by Professor Alvord, appearing on transcript page 361-362 (Abst., 170), in which he says that

"Giving due weight to all the sources of information that are available, my opinion is that from the latter part of the 17th Century through the first third of the 19th Century, men engaged in the fur trade passed up and down the Chicago and Desplaines rivers in canoes and flat boats very regularly; that the fur trade was pursued by the French as long as they held possession of this country; was developed more fully by the English

and later by the Americans. That the most active trade carried on the two rivers falls between the period of 1783 and 1825, or thereabouts; that the traders found a very easy passageway by means of these rivers in the early spring. That during the time of drought such as occurred in the summer or fall, the passage was hard, but even then they forced their boats through the waterway, often being obliged, however, to carry their packages around the shoals and rapids."

4278 As to fur traders passing up and down the Chicago and Desplaines in canoes and flats very regularly from the 17th to the 19th centuries, the plain and obvious sense of this conclusion seems to me unwarranted by the facts. The sources in the record do not indicate the regular use or even the possibility of regular use of the Desplaines. I do not know just what was had in view in speaking of flatboats, nor do I know of any warrant for this statement as far as it applies to flats. As to canoes, can it be said the sources establish the fact of their passing up and down the Desplaines very regularly when Graham and Philips show that the river was dry or a gutter six months in the year; when we know it was frozen some two or three months; that in September Charlevoix considered it impassable; that Tonty and St. Cosme preferred the certainty of a nine league portage to the Chicago-Desplaines route in late October or early November; that Kennedy and Schoolcraft found it impassable in August; that Hubbard says in the one detailed account that he gives of his trip down, that they had often to put the boats on rollers and had to carry their goods on their backs a large part of the way?

As to the conclusion that the most active trade on these two rivers was in the period from 1783 to 1825, I do not care at the present time to dispute this, but I wish to examine
4279 the evidence as to what this "most active trade" amounted to. This is a period when one would naturally expect to find more records of such use than in the earlier period of white occupation of the interior. Professor Alvord, however, succeeded in finding but seven instances of actual passage of the Desplaines, my statement being based on what appears in the record, page 472. (Abst., 209.) These were, down: Hubbard, 1818; Heward, 1790; Furman, 1829.

Up: Perrault, 1783; Hubbard, 1819; Child, 1821; Fonda, 1825.

Of these seven, four occurred in the springtime. Heward,

May 12th to 15th; Furman, April 27th; Perrault in May; Hubbard, in the spring flood. No date is given for two, Child and Fonda; but it appears that Child came in a time of high water. Fonda gives practically no details.

Of the one remaining, this being Hubbard's passage down in 1818, the account shows the stream was in such condition that goods must be carried much of the way and boats must be put on rollers much of the way.

There are then seven instances in 42 years, five of them in the spring or flood time, with no certainty so far as one (Perrault) is concerned as to the passage actually being made over the Desplaines; another (Furman) was not a trader.

4280 On the other hand, I would observe, if the Desplaines was used actively in this period, what was the occasion for the wagon road, and the method of transporting boats by this road, as described by Graham and Phillips, and as referred to by Schoolcraft in his journey in 1821; and why the opinion of the traders whom Schoolcraft met on his journey, that a canal to Mount Joliet was needed?

To consider next the proposition that traders found a very easy passageway by means of these rivers in early spring; I would merely observe with respect to certain of the sources: LaSource and Montigny in 1699 did not. They walked 30 leagues and were very much fatigued. The surgeon in 1675 did not, for he had to pull the boat in the river and gave up the attempt. Joutel's party did not for a similar reason; they had to pull their canoes in the water and Joutel at least suffered from this. It may be admitted, however, that the passage was easier in the spring than at other seasons of the year.

Concerning the conclusion that during time of drought the passage was hard, but that even then they forced their boats through the waterway, I would say that some did this. For example, the American Fur Company traders as described by Hubbard; and St. Cosme's party, although in the latter 4281 instance the party left all but one canoe load of essentials at Chicago, preferring to make the long trip back after the remainder in the spring. The men from Montreal, reported by Joutel, did not. They actually abandoned the trip, or the transportation of their boats and merchandise at Chicago. Charlevoix, though only a traveler, and therefore, not loaded as a trader would be, did not. He sought another

route. Kennedy, in 1773, and Schoolcraft in 1821, did not; nor did Hubbard after 1824. And finally, the traders who used the well-beaten wagon road and the portage of fifty miles, as also those to whom Schoolcraft talked, evidently did not.

I now direct my attention to the conclusion of Dr. Thwaites, appearing at transcript page 989 (Abst., 415), wherein he says:

4282 "As a historian I would answer your question as follows: giving due weight to all the sources of information that I have examined, my opinion is that from the latter part of the 17th century through the first third of the 19th century, men engaged in the fur trade with the western indians, actually and quite regularly passed up and down the Chicago and Desplaines rivers in canoes and batteaux, Mackinaw boats, and other boats propelled by oars, or poles, laden with merchandise and furs; that these traders and travelers found a comparatively easy passageway by means of these rivers in the early spring, and sometimes at other seasons; that during times of drought, such as often occurred in the summer and fall on most of the western portage routes between the Great Lakes and the Mississippi (as for instance, on the well-known and much-used Fox-Wisconsin portage route) the passage was sometimes difficult; but even then these fur traders appear to have succeeded in forcing their boats over the Chicago-Desplaines waterway, although, perhaps, they were obliged here and there to make some carriage at that time of the year, the length of the carriage varying greatly from season to season, and from year to year according to the stage of water."

Professor Alvord having considered this same subject and I having just completed a consideration of Professor Alvord's conclusions, I shall not undertake to go into detail in every respect with reference to Dr. Thwaites' conclusions; but to subject them to such analysis as seems to me pertinent in the matter under discussion.

As to the regularity with which the Desplaines was used by traders and others, Professor Alvord used the words "very regular." Dr. Thwaites says "quite regularly." This is a weaker statement than Professor Alvord made, and my discussion of Professor Alvord's conclusion in this respect

should therefore be modified accordingly in considering 4283 Dr. Thwaites' conclusion.

I would observe, however, that it seems to me that there is warrant for this statement of Dr. Thwaites only in Hubbard's account of using the river up in the spring and down in the fall for a period of some six years or so. This doubtless was regular use of the river in that regularly in the spring and regularly in the fall the passage was made either down or up as the case might be. It seems to me somewhat strained to call this "quite regular" use, especially in view of the fact that Dr. Thwaites' conclusion applied to the whole period from the latter part of the 17th century through the first third of the 19th century.

Dr. Thwaites says these boats were propelled by oars or poles. I will simply point out that Hubbard indicates one other method; they were sometimes navigated on rollers.

He says further that they found a comparatively easy passageway by means of these rivers in early spring and sometimes at other seasons. It does not appear what his basis of comparison may be. Passing this by then, I shall consider his statement "sometimes other seasons." Of Professor Alvord's fourteen direct instances of the use of the Desplaines, in addition to Cass' trip in 1827 which I shall include here for consideration, making fifteen passages in all, the trips possible which seem to me may fairly be considered in 4284 analyzing this conclusion of Dr. Thwaites are as follows:

Those up the river: Joliet, September, 1673; light canoe, no details of passage.

Tonty, November to December, 1680; not certainly in a boat. Parkman says not. My own impression, as I have pointed out, is that Parkman's statement is not justified; and further, as I pointed out a few moments ago there is nothing to indicate the length of the portage that might have been made at this particular time.

LaSalle, December to January, 1680-1681; this passage was made on foot and great difficulty was encountered from snow and cold.

Fonda, 1825; no month and no details are given.

Child, 1821; no month is given. It is pointed out that there was high water, so I infer, although I grant this is not a necessary inference perhaps, that the passage was made in the spring time. Certainly in time of high water.

Cass, July, 1827. Apparently an easy passage in a large

canoe. There had been recent rains which naturally operated to influence the condition of the river.

The passages down then which I shall consider in this connection, are those of Membre or the LaSalle party, in January, 1682, on sledges on the ice, a distance of 80 leagues; 4285 St. Cosme, 1698, November, eleven to twelve days consumed; a distance of 15 to 17½ leagues portaged; Hubbard, 1818, October approximately; great difficulty pointed out in the document in making the passage.

I would like to ask Mr. Scott if I may see the other copy of my notes.

Mr. SCOTT. Yes.

A. There seems to be something lost in the copy which I have prepared.

(Document handed witness.)

The WITNESS (continuing: To summarize, of these nine passages, two, those of LaSalle, December to January, 1680 to 1681, and Membre or LaSalle, in 1682, were on foot or on sledges; of two others, Child and Fonda, no month or no details of the passage of the Desplaines are given, though it is a fair inference that Child's passage was made in the spring-time. But for the purpose of my analysis, Dr. Thwaites did not show, and I believe it cannot be shown that either of these was not made in the spring.

This will leave then, five passages as the possible basis of this generalization. In three of these canoes were used, these three being the passage of Cass, of Joliet and of Tonty. This statement made on the supposition that we contradict Parkman and assume that Tonty went up the Desplaines in a 4286 canoe. The other two, St. Cosme in 1698, and Hubbard in 1818, had anything but an easy passage.

So that Dr. Thwaites' generalization rests on the three canoe trips of Cass, Tonty and Joliet. Cass was not a trader. If Tonty and Joliet were traders, they were not trading on this particular occasion or occasions, so that Dr. Thwaites' statement as to easy passage at other seasons seems to me to be without much warrant in the accounts of the actual passages made of the Desplaines at such times.

I would here further call attention to the fact which I have already shown in connection with my consideration of Professor Alvord's conclusions, that not all passages in early spring were easy. It is fair, it appears to me, to call attention, in connection with Dr. Thwaites' "other seasons," to

the experience of Kennedy, of Charlevoix, and of Schoolcraft.

4287 Next, to consider the statement that during drought the passage was sometimes difficult. I will call attention to two points; the duration of the drought, and I am using Dr. Thwaites' words, and the point which he has made, that the passage was sometimes difficult at such times. If Dr. Thwaites' statement is to be taken in what seems to be the obvious sense, by this sentence, that during times of drought such as often occurs in the summer and fall on most of the western portage routes, and so forth—I have read enough to indicate the sentence I have in mind—this sentence means during times when the Desplaines river was low. According to LaSalle this is most of the year. Graham and Philips said six months in the year; and I think it an obvious inference that they did not include the winter months in that statement. St. Cosme said there was no water in the river except in the spring, so that one must always portage from Isle La Cache to Mount Joliet, seven leagues. This seems to agree with the experience of Hubbard. I would ask then whether it is fair or proper to speak of so long a period as a time of drought, simply because the Desplaines was low or dry during such period. In my opinion it is not.

I would further observe, although at the risk of possible repetition, that this period in view is not the period of occasional drought, but rather one of the seasonal drought
4288 or low water.

As to his conclusion then that the passage at such times is sometimes difficult, I shall undertake to note and examine all of the instances, and here I am speaking of actual accounts of passages of the Desplaines, that properly fall under this class; and I will begin with the assumption that he means all passages other than those in the spring. We have then the following:

Up the river: Joliet, 1673; time, probably September; Child, 1821, no month; time of high water; Tonty, 1680, November to December; uncertainty as to his having passed the Desplaines in a boat; LaSalle, 1680 to 1681, December to January, on foot through the snow. Fonda, 1825; no month, no details. Cass, 1827; July; large canoe.

Down the river: Membre or LaSalle, January, 1680, on sledges on the ice. St. Cosme, November, 1698. Hubbard, October, 1818.

Here again are nine instances. Of these, two, LaSalle and

Membre, who were on foot or with sledges, may probably be excluded as not within Dr. Thwaites' view when making his statement. One, Fonda, may have been in the spring. At any rate, it is certain there is nothing to indicate that he came 4289 in a time of drought. Cass; recent rains had swelled the river. Child; there were two feet of water all across the portage. This leaves for consideration four: Joliet, Tonty, St. Cosme and Hubbard. To these I propose to add at this point, for the purposes of this analysis, Charlevoix, Schoolcraft, the men whom Joutel tells about, and Kennedy, who would have used the river if they could or if they thought they could.

We have then eight, which I shall now consider further. Of these eight there are no details concerning Joliet, the passage being probably in September; and as I have indicated we are uncertain as to Tonty in November or December. I suppose it is a fair inference that Joliet was not troubled much, though, since his canoe may not have weighed over forty to fifty pounds, there is no certainty as to how far he may have carried it. In this connection I would point out, however, that there is an indication which leads me to think that the portage made by Joliet and Marquette in 1673 was what we might perhaps describe as the short portage; that is, that they actually came up the Desplaines on that expedition.

I ask then, is it fair to say, and I use the word fair only in the sense of historical validity, is it fair to say that based on the experience of Hubbard, Charlevoix, St. Cosme, the men whom Joutel writes about, Kennedy, Schoolcraft, Tonty, 4290 and Joliet, four of whom did not use the river, three because they could not, and one because he believed he could not; two of whom we have no certain knowledge concerning and two of whom had the hardest kind of a trip, one portaging fifteen to seventeen and a half leagues, and the other at least seven leagues after reaching the Desplaines,—that the passage in time of drought, was sometimes difficult? It seems to me the conclusion does not adequately express the facts as they are found in the historical sources.

I read from Dr. Thwaites' conclusion:

"But even then these fur traders appear to have succeeded in forcing their boats over the Chicago-Desplaines waterway although, perhaps, they were obliged here and there to make some carriage at that time of the year."

"That time of the year" in view in this statement is obviously the period of drought. That point I have already dis-

cussed. The statement then is that at such time they were perhaps forced to make some carriage here and there. I shall undertake to analyze the specific accounts on which such
4291 a generalization must be based, and to divide them into two classes; those who did succeed in forcing their way, and those who did not.

Under the first class, those who succeeded in forcing their way, we have Tonty, concerning whom no details are given; St. Cosme, who forced his way with one canoe, it is true; but left the others behind in cache at Chicago. Hubbard, in 1818.

Those who did not succeed in forcing their way: Schoolcraft, in 1821, who did not get to the Desplaines in his boat. Kennedy, to whom the same statement will apply. Joutel's men, who left their goods at Chicago, because there was too little water in the river, and what little there was was frozen.

Here, too, I think should properly be considered Charlevoix who did not try to force his way along the Desplaines because the river being a mere brook he was informed that he would not find water enough for his canoe.

It appears then that there are seven instances in all, including Tonty, concerning whom there is no certainty whatever. Of the six then, leaving Tonty out of view, three did not succeed in forcing their boats through. One did not try because he was told there was too little water for his canoe.

One succeeded in part. That is, he left most of his
4292 goods behind and he forced one boat through or down, at any rate, the Desplaines route. To these latter two then, Dr. Thwaites' generalization "perhaps were forced to make some carriage here and there" will apply. St. Cosme said one must always make a portage from Isle la Cache to Mount Joliet, seven leagues. His own experience was that he made a portage of fifteen leagues or more. Hubbard said that from Isle La Cache they carried their goods on their backs most of the way. Hubbard succeeded, and St. Cosme succeeded in part; that is, he left most of his goods behind and forced one boat through.

As to the last conclusion of Dr. Thwaites to the effect that the length of the carriage varied greatly from season to season and year to year, according to the stage of the water, I agree entirely with his conclusion and will point out only something as to the length of the variation. It varied from nothing at all to fifty miles or more.

4293 I now direct my attention to McLaughlin's conclusion as to the Desplaines, transcript, page 785-786 (Abst., 327), where he says:

"I should say that during that period (the period being from the time of Charlevoix to the year 1825) the Des Plaines river was used with apparently considerable frequency as a route of trade and commerce; that at certain seasons of the year it seemed to have presented some difficulties, other seasons of the year it was a well-known means of communication between the lake region and the lower Illinois and Mississippi."

The authorities which Professor McLaughlin used and on which his conclusions must obviously have been based are as follows:

Charlevoix, record 760 (Abst., 316); Hutchins, record 762 (Abst., 318); Heward, record 763 (Abst., 318); Darby, including the St. Louis Enquirer editorial, record 766 (Abst., 319); Kinzie's letter, record 768 (Abst., 320); Hubbard, record 769 (Abst., 321); Cass, record 772 (Abst., 321); Schoolcraft, record 774 (Abst., 322); Forsyth, Table of Distances, record 776 (Abst., 323); Long, record 777 (Abst., 323-324); Graham and Philips, record 779 (Abst., 324); Keating, record 780 (Abst., 325); Childs, record 781 (Abst. 326); Drown, record 782 (Abst., 326); Flint, record 784 (Abst., 327).

His answer was based on the foregoing authorities, fifteen in all of which three only give first hand accounts of actual use of the Desplaines. These three being Heward, Hubbard and Child.

4294 I would observe then that Professor McLaughlin being limited to these fifteen sources of which only three were direct, seriously crippled him in drawing the conclusions which he drew concerning the character of the use of the Desplaines. For example, he had Schoolcraft's general statement submitted to him, and from that he drew certain conclusions; but these conclusions are overturned by the specific experience of Schoolcraft with the Desplaines, which was not submitted to Professor McLaughlin for consideration.

Again, he had Hutchins' general statement of some four lines in length which is negatived in one specific case by the experience of Kennedy recounted in the same book. I suppose it is not necessary to repeat what Kennedy's experience was.

I would observe further that his conclusion, as I have pointed out, being based mainly on second-hand authorities, these are open to errors which I believe I have already indicated; first,

that they speak generally of a route of travel from the lake to the Mississippi by way of the Chicago-Illinois; or, second, that they are subject to the error more or less commonly diffused, that the communication by this route was easier and more frequently used than in fact was the case.

4295 It may be true that this was a route of trade and commerce, without its following necessarily that this trade and commerce navigated the Desplaines river in boats. It may have been carried on sledges as in the case of La Salle's passage down the river; or on men's backs, as St. Cosme and Hubbard and others point out; or in wagons or carts as Graham and Philips show. Or in the case of travel, the travel may have been—I mean to say the means of transportation,—horseback. For example, the passages of Tousey and Schoolcraft. Or, they may have gone on foot as in the case of LaSource; or possibly the boats may have been propelled on rollers as in the case of Hubbard. Or finally, in the case of birch canoes which might weigh as little as forty or fifty pounds, the men might possibly have walked and carried the canoes on their backs.

He says that at certain seasons the route seems to have presented some difficulties. I observe with reference to this conclusion that it is weak in two respects. One I have already noted, that Professor McLaughlin did not have at his disposal for the purpose of consideration, many of the accounts which present the difficulty or the impossibility of using the Desplaines, in the strongest light; and secondly, this conclusion does not adequately interpret in my opinion some of those he did have.

4296 I will call attention, for example, to Graham and Philips' report, which shows that at time there was a fifty mile portage; to the appendix to Hutchins, giving Kennedy's experience; to Charlevoix, showing that there was not water enough to float a canoe, or at least, that he was so informed and shaped his action with reference to this information; to Schoolcraft's account. This was not submitted to Professor McLaughlin, however, and so he cannot be held responsible in any way whatever for it,—of his own total failure even to get to the Desplaines in a canoe.

Mr. SCOTT. I will ask you now, Dr. Quaife, basing your answer upon your examination of the sources to which you have referred in your testimony, what your own conclusion is as to the use of the Desplaines river during a period concern-

ing which you have testified, and as to its capability for use, as shown by those sources?

Mr. CORNEAU. I again object to the capability of use.

The sources show that the Desplaines is subject to great fluctuations, from a depth of six feet and width of a mile or even more, to a dry or nearly dry river bed. That for a short time in the spring it was flooded, during which periods boats of several tons burden might float upon it. La Salle said this period was from fifteen to twenty days in duration; 4297 that for a somewhat longer time and that when the stream was raised by rains, canoe navigation was possible.

As to the historical use made from 1763 to about 1830, the accounts vary greatly, depending on the season and the state of the stream at the time in question. There are many general statements which seem to indicate that there was a highway of trade and travel between the foot of Lake Michigan and the Mississippi by way of the Illinois and the Chicago-Illinois rivers. Much less frequently do these general references even mention the Desplaines. It is fair to suppose 4298 that the Desplaines was navigated at such time as it offered an easier passage to the Illinois than was presented by other routes or other methods of transportation.

The vital question involved concerns the actual use made of the Desplaines. Of the general references many throw no light on this; many others can be shown to lack the proper basis in fact. All should properly be interpreted in the light of such specific accounts as we have of the use of the Desplaines, or of use that would have been made of it if possible, or if deemed feasible. Of such sources the number is very small. Professor Alvord cited fourteen direct references of actual use in a period of 250 years. With these should properly be considered such reports as those of Cass, in 1827, Charlevoix in 1721, Kennedy in 1773, Schoolcraft and Cass in 1821, the men whom Joutel reports concerning in 1686, and Keating's report of Lieutenant Hopson's passage prior to 1823. An analysis of these—approximately a score in all—and of the general reports in the light of what these reveal, shows that the river was sometimes navigated by canoes, and in a few instances, and in times of spring flood, by pirogues or Mackinaw boats; the chief difficulty to its passage in the season indicated arising from its excess of water and 4299 swiftness of current. That for the remainder of the year, aside from the winter during which time it was

ordinarily frozen over, such boats could as a rule be floated along the Desplaines, if at all, only with great difficulty and subject to portage much of the way. That much of the time boats could not be floated down the Desplaines, it being necessary to portage all the way from the Chicago to the Illinois river and at times even further. But at times, rains might raise the river so as to make its passage in canoes possible.

Finally, the careful historian would naturally seek to correct or confirm the judgment based on these various historical sources, by the experience of those who constructed the Illinois and Michigan Canal; and by the facts collected by engineers and others who have studied and observed the Desplaines river and valley in more recent times. Only in the light of this information could he safely attempt to formulate a definitive judgment as to the navigability of the Desplaines. I have not had opportunity to study these things with the requisite degree of care and thoroughness, but such knowledge as I possess concerning them, tends to confirm me in the conclusions I have above expressed.

4301 I desire to make certain corrections in my testimony in this case. I drew the conclusion from a study of Long's report of 1817 that the expedition took place in the spring of 1817. I feel that that conclusion is not necessary and modify my testimony to that extent. The date of
4302 report is March 4th, 1817, and considerations as to the season and climate and so forth, make it seem to me not at all necessary to infer as I did on my first study that he made the actual survey that spring. I now turn to volume entitled (reading):

"Account of an Expedition from Pittsburgh to the Rocky Mountains, performed in the years 1819 and '20, by Order of the Hon. J. C. Calhoun, Sec'y of War: Under
4303 the Command of Major Stephen H. Long. From the Notes of Major Long, Mr. T. Say, and Other Gentlemen of the Exploring Party. Compiled by Edwin James, Botanist and Geologist for the Expedition. In Two Volumes, with an Atlas. Vol. I. Philadelphia: H. C. Carey and I. Lea, Chestnut Street. 1823."

The reference is in Volume 2, page 335, and is an account of the country between the Ohio, Mississippi and the Lakes, and of the rivers of most note in this plain or rolling country. Page 335 (reading):

"The rivers of most note within this region, are the Wabash above the hilly country, before described, the

Kaskaskias, Illinois, Rock and Wisconsin, tributary to the Mississippi, the Fox of Green Bay, the St. Joseph of Lake Michigan, and the Maumee and Sandusky tributary to Lake Erie. These rivers are all navigable for boats of ten to fifteen tons burden when swollen by spring freshets, but during the greater part of the summer and fall, they have not a sufficient depth of water to be navigable for boats of burden, and in winter their navigation is entirely obstructed by ice. The spring freshets, consequent to the melting of the snow and
4304 ice, usually take place in the month of March, the southerly streams being open for navigation much earlier than those in the north."

This passage agrees well with what La Salle said about Desplaines. The Desplaines is not mentioned by name in the passage, being considered under the heading of the Illinois. The passage bears on the argument made in this case as to trade by way of the Illinois and Desplaines rivers, from 1764 to the time of the publication of the St. Louis Enquirer editorial, and points out that while the Illinois is navigable in spring freshets in March, that these rivers are during the greater part of the summer and fall lacking in sufficient water to be navigable for boats of burden, and in the winter their navigation is entirely obstructed by ice. That is, the thousands of boats mentioned in the editorial must have made their passage, so far as we are to accept this statement at any rate, during a small
part of the year and the weekly average must have been
4305 correspondingly higher. Long and other gentlemen engaged in his expedition, assisted in compiling the work and revising the manuscript for the press. Their own contributions were put into it, without calling special attention to the fact. To show Long's responsibility for the portion I just read, I read from the preface (reading):

"In selecting from a large mass of notes"—and I should say that this preface is by Mr. James, the compiler of the volumes—"and journals the materials of the following volumes, our design has been to present a compendious account of the labors of the "Exploring Party," and of such of their discoveries as were thought likely to gratify a liberal curiosity. It was not deemed necessary to preserve uniformity of style, at the expense of substituting the language of a compiler for that of an original observer. Important contributions of entire passages from Major Long and Mr. Say, will be

recognized in various parts of the work, although we have not always been careful to indicate the place of their introduction. Those gentlemen have indeed been constantly attentive to the work, both to the preparation of the manuscript and its revision for the press."

4306 At a certain point in my testimony I said in effect that Schoolcraft said that traders had said that a canal was necessary to Mount Joliet, a length of thirty miles. That allusion of mine, is not strictly correct, and I read from page 332 of Schoolcraft's *Travels in the Central Portion of the Mississippi Valley*, to stand as a correction of that statement (reading):

"We have, however, seen its channel, at a sufficient number of points, to determine that it has several long and formidable rapids, which completely intercept the navigation at this sultry season:—a remark that has
4307 been confirmed by meeting several traders, on the plains, who had transported their goods and boats in carts from Chicago creek, and who informed us, that they thought it practicable to enter the Illinois at Mount Joliet. This would lengthen the portage to about thirty miles, but it has been perceived that we ourselves began it, far below the last mentioned point."

Schoolcraft was talking about a canal. The traders evidently expressed the opinion that it would be practicable to enter the Illinois at Mount Joliet, saying nothing about a canal.

To complete the identification of *Carte Particuliere*, it appears on transcript 4218 (Abst., 1589). I have volume 6 of Chatelain's *Atlas*, described in my former testimony, and procured from the Library of Congress. I am informed
4308 by authorities of Library of Congress that first and second editions are identical. They sent me the second.

This an atlas, historical and geographical, ancient and modern of the world, volume 6, facing page 90 appears, the "*Carte Particuliere du Fleuve, St. Louis*," etc., the identical
4309 map introduced into the case by complainant's witness.

Facing page 82 of this volume a map shows Canada, and something of New France, that is, the Great Lakes and a portion of the present United States to the Ohio river on the south. The region of the modern Illinois and the Great Lakes is very similar to Von Keulen's map heretofore introduced by me. (Trans., 4205; Abst., 1584; Appendix,). The Illinois is shown as rising far around to the east or northeast of the sources of the St. Joseph river; the Chicago river is

shown as flowing in a northerly direction from its source to its entrance into the lake. No Desplaines river shown. This map

not an exact copy of Von Keulen's map, but very similar.
4310 The word "portage" appears where we would expect to find the Fox-Wisconsin portage. Waterway apparently is continuous from the Mississippi to Green Bay.

There is a portage from a river flowing into the eastern end of Lake Erie to a river marked the Wabash; which I take to be the Ohio river as we use the term to-day. The Ohio or Wabash flows about parallel and very close to the southern side of Lake Erie. No portage is shown from the Chicago to the Illinois. The title indicates the map is based on recent observations and on divers memoirs and manuscripts. The volume was published in 1719.

Whereupon said map was offered in evidence.

(For copy of said map, see appendix, page.....)

I call attention to this map and others as a mere compilation. The authorities on which it is based not indicated. I call attention to the groundlessness or invalidity of it as a historical source.

4311 Facing page 90 is a third map, or set of views, inscriptions and explanations. It is a sketch of America, the view of the canoes in the upper left hand corner, is taken from Lahouten. (See Thwaites' Edition, volume 1, page 80.) I have not seen that the volume credits Lahontan as a source.

4312 A fourth map, facing page 91, shows North America, approximately as far west as the Rocky Mountains, south to the Gulf of Mexico, and a portion of the Gulf of Mexico and Northern Mexico as we would use the term to-day. For Illinois and region, this is apparently exactly the Von Keulen map. The Illinois is found rising far over toward the eastern side of the southern end of the Peninsula of modern State of Michigan; a little distance to the west of the western end of Lake Erie. The Chicago river rises in northern Indiana or southern Michigan some distance to the southeast of

4313 Lake Michigan, and place Chicagou, as on Von Keulen map, is location of modern Fort Wayne. There are other features here that lead me to think that this is merely a reproduction of the Von Keulen map, but will not take time, unless called upon, to put them into the record.

Whereupon said map was offered in evidence.

(For copy of said map, see appendix, page.....)

Referring again to the third map facing page 90,

the views of the savages and the village may be seen in Lahontan, Thwaites' Edition, Volume 2, page 430, and the scene representing the courtship and marriage customs of the Indians appears in Lahontan, Volume 2, page 492, Thwaites' Edition. The views representing the sickness and death of the savage, are from Lahontan, Vol. 2, page 524, of Thwaites' Edition, and the hieroglyphics are from Lahontan, Thwaites' Edition, Vol. 2, page 720.

4314 The fourth map, facing page 94, being a series of sketches and views, and several coats of arms, are taken from Lahontan, Vol. 2, page 686, Thwaites' Edition. The buffalo in the upper left hand corner, is from Hennepin's New Discovery, Vol. 1, page 146, Thwaites' Edition, and the view of Niagara Falls is from Volume 1, page 54, Thwaites' Hennepin.

I again call attention to the point, that one should use these early maps and charts with caution, and in view of the remarks I have been making about this map, the utter worthlessness from the point of historical validity of such a collection must appear.

4315 These maps and charts are drawn largely from Hennepin, Lahontan and Von Keulen. The whole world is described in the work, and other similar sources must have been relied on, hence, the danger of using such maps at all.

To further identify the account of Michigan Pioneer Historical Collections of the inquiry held on Lieutenant Cadotte, it is taken from the Haldimand Papers. 9 Michigan Pioneer Historical Societies shows that a representative was sent to Ottawa, Canada, to examine the Canadian archives, and as a result the society obtained possession of copies of these documents, and began the publication of them in Volume 9, 4316 and continued it through Volume 10. The Court of Inquiry on Lieutenant Cadotte, was taken from the Haldimand Papers, as found by the representative of the Michigan Society, in the Canadian archives at Ottawa.

J. Watson Webb, was a journalist, born in 1802, died in 1884; entered U. S. Army in 1819. Resigned therefrom in 1827, having held offices of minor rank during entire period.

4317 During this period he was stationed at Chicago for some time. Hence, the knowledge of Chicago referred to in the letter cited. 1827 became editor of New York Courier; 1829 purchased Enquirer, consolidated the two and published them until 1861, when they merged into the World. Advo-

ated principles of Whig party during its existence, when it was one of the influential journals of America during that time. Senate objected to his appointment as minister to Austria in 1849; was minister to Brazil from '61 to '69. Served in connection with the affairs of Mexico and France and United States, when French under Napoleon II was seeking to establish empire in Mexico; declined a mission 4318 to Turkey in 1861. Declined appointment as Brigadier General in northern army in Civil War.

The letter introduced as part of manuscript collections of Chicago Historical Society, written by Webb to John Wentworth, when latter was engaged in investigating early Chicago history. Gives account of conditions at Chicago when Webb was stationed here. Refers to a biography of himself by Andrews. There was objection to the reference I have read to Colonel Daniel M. Parkinson. Parkinson was born in Tennessee in 1790; moved to Madison County, Illinois, 1870. 4319 Sangamon County, 1819; moved to Galena, 1827; was there at the time of Winnebago outbreak, in which connection I cited Parkinson; enrolled in company formed by General Cass, on that trip which was under discussion, for service in Winnebago war. Settled in Lafayette County in 1827; was captain in Black Hawk war. Living in Wisconsin in 1855. On page 14, 2 Wisconsin Historical Society Collections, it appears his portrait was solicited by the society.

To further identify Hon. James H. Lockwood: A sketch of his life appears in 2 Wisconsin Historical Society Collections, page 98.

4320 He was born in New York, 1793. 1814-1815, in the army, came west to Detroit. Employed as a sutler. 1819, settled at Prairie du Chien. Declined appointment as judge, studied law, and lived at Prairie du Chien in 1855, when at the request of the corresponding secretary of the Wisconsin Historical Society, wrote article, "Early Times and Events in Wisconsin," appearing on page 98, Vol. 2, of Wisconsin Historical Society Collections. Promised his portrait 4321 to the society, along with such men listed on the same page as Cass, Governor Reynolds of Illinois, Governor Henry Dodge, Governor Talmadge, Governor Dewey, and others.

I wish to correct an error in detail in my testimony, transcript page 3991 (Abst., 1512), on Life of Gurdon S. Hubbard. I stated that the passage read from Hubbard, p. 121, "This incident served for a standing joke," and so forth, referred to an account of the journey up the Illinois from ePoria and on-

ward. He is actually describing a journey down the Illinois, on the return from Mackinaw in the fall rather than the return journey up the river in the spring; error does not affect in a vital way my argument.

4322 The passage on p. 121, of the Life, and quoted on page 3991 of the record refers to the trip from Mackinaw to Chicago.

4323 As to whether Delisle and DeFer referred to at transcript 4192 (Abst., 1580), are the same persons referred to by complainant's witnesses, I point out there were two Delisles, a father and a son, both of them noted mapmakers. DeFer is the same one whom complainant has cited in its testimony.

My attention is directed to Morse's American Gazetteer, referred to by Alvord on the direct, transcript page 309 to 314. (Abst., 142-145.)

4324 I have made an investigation of this work.

Morse was a geographer of considerable note. Many 4325 editions of Gazetteer published from 1789 to 1820. Treats of geography of entire world. Work a compilation. In preface expresses obligation to Hutchins, who contemplated work of same sort. Gave him collections, maps, etc. Indebted to many other words and sources for his information. Lists 49 works on which this is drawn, and concludes, "And many others of less note." Considerable part of the matter in volume selected from American Universal Geography.

Work by Morse at a prior date. In compilation of Gazetteer, Morse employed an assistant to do work for him.

4326 One John Lendrum, since he himself was "unwilling to divert his attention more than was absolutely necessary from his more important professional duties." Directed Lendrum and scrutinized his work, though assistant rather than himself, did work of compiling large part of volume. In preface to 1821 edition, states his geographies are sources upon which dependence for permanent geographical features of 4327 Gazetteer have been placed. His statement about Illinois-Chicago route which was put into the record reads as though from Hutchins' topographical description. It reads, transcript, page 313 (Abst., 144) (reading):

"The Illinois river furnishes a communication with Lake Michigan by the Chicago river and by two portages between the latter and the Illinois river, the longest of which does not exceed four miles."

Same statement occurs in Hutchins, p. 42.

Comparison of pages reveals so many statements that are common to both, it seems probable that Morse paraphrased Hutchins' account, and condensed it to his own use. In his introduction to the *Universal Geography* of 1796, says he 4328 made free use of publications suited to his purpose, and frequently uses words and ideas of writer, though the reader has not been particularly apprised of it. On page 4, 1821 Edition, *The New Universal Gazetteer*, he states it impossible in work of this general nature to avoid error. Writer of necessity relies on others who often lead him astray. All that can be demanded of general geographer is diligent collection and use of best materials, then it goes on to show he has spared neither industry nor expense to accomplish this, but he is sensible of defects, and will be obliged for communications that will assist in improving future editions.

4329 This is a common sense statement and shows that Morse agrees to this extent with my estimate, that it is a compilation, not expected to be free from error. If my conclusion is correct, Morse will have whatever force attaches to Hutchins' *Topographical Description*, and is not properly cited as additional authority on this question.

I cite Boggess' *Settlement of Illinois* in this connection. On page 248 of this critical bibliography, is an account of the geography of the United States, and contiguous British and Spanish possessions by John Melish with this criticism 4330 or estimate which I read (reading):

"A trifle over one page is devoted to Illinois. Of interest only as showing what was presented to the East at the time concerning Illinois. Melish was a professional map and gazetteer maker. His work typifies that of the geographers of the time, who described the world with marvelous audacity."

I now take up points ranging more or less over the whole discussion of cartography and maps introduced. I call attention to the map by Sanson, entitled: "*l'Amerique Septentrionale divisée en ses principales parties, scauoir Les Terres Artiques, le Canada, ou Nouvelle France, Le Mexique ou Nouvelle Espagne, Le Nouue au Mexique, Les Isles de Terre Neuve, de Californie,*" etcetera. * * * Relations de toutes ces Nations, Parle Sr. Sanson Geographe Ordinaire du Roy 1692."

Sanson was one of the royal geographers to the King of France. His father was a mapmaker. He was succeeded by Jaillot. This map shows the modern Mississippi as flowing

south and then southwest into the Gulf of Mexico, at a point approximately on the coast of Texas. The river is labeled "Chucagua," and bears the same name farther up in its 4332 course. There was evidently slight knowledge of the geography of the Great Lakes region at this time, and of the Mississippi. This river which I have said is marked "Chucagua" is what I take to be the Mississippi.

COUNSEL FOR DEFENDANT. We introduce this map in evidence with the understanding that we are to present photographs just as in the case of the Government.

(For copy of said map, see appendix, page)

Objection to the map, incompetent, irrelevant and immaterial.

Next, I call attention to Jaillot's map of 1719, C. H. S. Collection, No. 16. Jaillot is the man who succeeded Sanson and secured control of his maps and other materials. (See 5 Winsor, page 79.)

4333 This is a map of as much of North America as was known at the time. The Mississippi is represented as about as crooked as the letter S. The Western part of Lake Erie is due south of a portion of Lake Michigan. The Illinois river on this map is not connected with Lake Michigan, but with Lake Tracey or Superior by a water route running from the middle east and west of southern part of Lake Superior due south across central part of modern State of Wisconsin until it connects with the Illinois some distance to the southwest of Lake Michigan. Green Bay more fairly represents modern Lake Michigan than does the Lake of the Illinois as here designated, which is intended to represent the modern Lake Michigan.

4334 The map in these features is extremely inaccurate. Maker could have had little or no knowledge of region. Whereupon said map was offered in evidence.

(For copy of said Exhibit, see appendix, p.)

Motion to strike out testimony as to this map, incompetent, irrelevant and immaterial.

The WITNESS (continuing). I now call attention to certain maps showing the Desplaines river, or what apparently stands for it, with the designation "Chicago river," or some variation of that name.

4335 Referring first to map No. 15, C. H. S. Collections, entitled, "Carte de la Louisiane et du Cours du Mississippi Drefsee sur un grand nombre de memoires entran tres sur

ceux de Mr. le Maire Par Guill aume Delisle de l academie R le Maire des Sciences." (Trans., 4207; Abst., 1585; Appendix,)

This shows the Illinois rising far over in southern Michigan, a considerable distance to east of St. Joseph river, which appears as a rudimentary stream on map, but I cite it specially because of the representation of the river which I take to be the modern Desplaines with the name "Chicago R." What is apparently the Chicago, without being named is represented, the designation Chicagou appearing in the lake opposite the mouth of the river; whether a place designation or not, shall not attempt to decide. There is no portage shown between the Desplaines, there denominated the Chicagou, and the Chicago or Lake Michigan. There is a portage between the St. Joseph and the Illinois.

4336 One is shown between the Miami and the Illinois, though the river corresponding to the Miami is not named. Also a portage between the Miami and the Wabash which is not named; between the Wisconsin and Fox; about the east end of Lake Erie, and the headwaters of the Ohio; they are marked in each case by the word "portage" printed on the face of the map. Map is dated June, 1718. The river which is the modern Illinois proceeding from the mouth towards the source has three designations along the lower side, the Riviere des Illinois R. de Macopin and Huakiki R. The name "Rievère des Illinois" is in part, below the junction of the Chicagou R., and the R. de Macoupin, the name "Illinois" proceeding toward the source of the river, is directly opposite the mouth of the Chicago river, and would be cut in half by the Desplaines if extended.

4337 I now refer to, "Geography Made Easy; being an Abridgement of the American Universal Geography." * * * By Jedidiah Morse, 4th edition, Boston, 1794. Facing page 66 is a map of the U. S. of America, showing the Desplaines river, with the label "Chicagou R." It rises approximately opposite the site of modern Chicago river, flows in a southwesterly direction to its junction with the Haukiki or modern Kankakee, to form the Illinois. No representation of modern Chicago on the map. The map is not specifically dated.

Whereupon said map was offered in evidence.

(For copy of said map, see appendix, p.)

4338 I call attention to the map appearing on frontispiece to James Adair's History of American Indians. Shows

a river approximately the modern Desplaines with label Chicagou R.; also two smaller rivers flowing into Lake Michigan near the southern end. One may perhaps represent the north branch of Chicago. The other more likely the Calumet; no names given. What I take to be a place name, Chicagou, appears partially where these rivers flow into the lake. Date of this map is 1775. (Trans., 4208; Abst., 1586; Appendix,)

4339 Volume 5, p. 84, Winsor's Narrative and Critical History of America is a reproduction of Huske's map of the eastern portion of North America in 1755; sketched from Huske's Present State of North America, etc., Second Edition, London, 1755. A river, evidently the Illinois, rises at a point somewhere to the southwest of the southern end of Lake Michigan. No indication of Desplaines, unless upper portion of Illinois be taken for that. No certain indication of modern Chicago, though slight projection may be so considered.

Whereupon said map was offered in evidence.

(For copy of said exhibit, see appendix, page)

I now refer to the frontispiece of Volume 2 of Jeffries Natural and Civil History of the French Dominions in North and South America, published at London in 1761, a work referred to by Winsor as the most readily accessible which gives an account in English of French dominions at this time. The map shows what apparently stands for the modern Desplaines as Chicagou river. A river flowing from the northwest down into Lake Michigan at its southwesternmost point, apparently represents the north branch of the Chicago river, but has no name.

Whereupon said map was offered in evidence. (For a copy of said exhibit, see appendix,)

I call attention to map entitled "A Particular Map of the American Lakes, Rivers &c. Par le Sr. D'Anville de l'Academie R le des Inscriptions et Belles Letters et de celle des Siences de Petersbourg Secretair de S. A. S. Mgr. le Due D'Orleans. London. Drawn & Engraved for John Harrifon No. 115 Newgate Street, June 25, 1790."

The modern Desplaines river is here labeled "R. Chicagon." There is no representation of modern Chicago, although a place named "Chicagon" is indicated at point where one might expect modern Chicago to be. There is no portage at Chicagon or at the river marked "Chicagon" in Lake Michigan.

4341 I take that to be merely a branch of the Desplaines or Illinois. Portages are marked between the Wisconsin

and Fox, and between the St. Joseph and Wabash, by the word "Portage."

Whereupon said map was offered in evidence. (For a copy of said exhibit, see appendix,)

I now refer to Popple's map of 1732. Complainant's witness has testified that Popple was the greatest English geographer of the 17th century, until Mitchell's map of 1755. With reference to this map, I read from 5 Winsor's Narrative and Critical History, page 235 (reading):

"Mention has already been made of the great map of 4342 Henry Popple in 1732, and of the maps of the contemporary French geographer D'Anville; but their phenomenal labors were long in getting possession through the popular compends of the public mind. We find little of their influence, for instance, in the Gazetteer's or Newman's Interpreter, being a geographical Index of all the Empires, kingdoms, islands, etc., in Africa, Asia and America. By Laurence Echard, A. M. of Christ's College, Cambridge (London, 1741). In this New York is made to adjoin Maryland; and is traversed by the Hudson, Raritan and Delaware rivers; New Jersey lies between 39 and 40° N. L., and is bounded on the east by Hudson's Bay; and Pennsylvania lies between 40 and 43° N. L., but no bounds are given."

Reading, page 474:

"In 1732 appeared the great map of Henry Popple, Map of the British Empire in America and the French and Spanish settlements adjacent thereto. It was reproduced at Amsterdam about 1737. Popple's large MS. draft, which is preserved in the British Museum, is dated 1727. When in 1755, some points of Popple told against their claim, the English commissioners were very ready to call the map inaccurate."

In connection with this last citation, I call attention to my argument as to the standing of Mitchell's map, and the 4343 claims of the English in 1755 which that map undertook to illustrate. Referring to Mississippi Basin, page 112, is a citation to a portion of Popple's map of 1732 (reading):

"Note.—The opposite cut is a section of Popple's great map of the British Empire in America (1732), showing the supposed lake and its outlet towards the west."

The adjective "great" as used by Winsor is not part of the title of the map, which immediately follows the use of the adjective, which observation holds for each of the other citations

where that adjective is used. From the same volume, p. 183, in a discussion of the "Early English on the Ohio," and the ignorance of the English of the Ohio valley (reading):

"Even the great English map of Popple in 1732 displays little knowledge of any development beyond that represented by Delisle some fifteen years earlier."

I now refer to an article of C. C. Baldwin, Secretary
4344 of the Western Reserve and Northern Ohio Historical Society, being No. 25 of this volume 1, entitled, "Early Maps of Ohio and the West." Baldwin's article cited again and again by Winsor in his various works, and Hulburt in his Chicago Antiquities; by the latter with reference especially to the subject of maps of the interior region of the United States. Baldwin tells of the auspices under which Popple's map was produced. He says the progress, in comparison with earlier maps, was backward. Points out errors, among others that Long river is reproduced as Moingona river; the Ohio too near the lake, and other details. These criticisms refer to smaller general map at the begin-
4345 ning of Popple's atlas (reading):

"The scale on which the larger maps are drawn is very satisfactory; and the various portages showing routes of travel, are laid down with care.

"Chicago appears with its houses and its river of that name with Fort Miamis or Ouamis, which was really located on the St. Joseph on the east side of Lake Michigan, there called Illinois."

I turn to Popple's map, the one in the atlas which shows the upper portion of the Mississippi valley from the western half of Lake Michigan and the western portion of Lake Superior on to the westward to the region of modern Dakota. At the southwestern end of Lake Michigan is a river labeled "R: Chigagou," which rises to the south approximately of the center of Lake Michigan. Goes in a generally northwesterly direction, then almost due north, to Lake Michigan, roughly at the site of the modern Chicago river. Evidently, the map maker had the Chicago river confused with the Calumet. No north
4346 branch is shown, unless rudimentary tributary of main river may be so taken, and I don't so regard it. There is a continuous water connection between the Chigagou river and the Huakiki, or Macopin river, which is a continuation of the Illinois; the lake being found one-third of the way from the Chigagou to the Huakiki in the course of this water connection. The word "portage" written in the map in three places; in the

Chicagou river itself, midway between the Chicagou and Huakiki, and near the Huakiki itself. What the portage was in mind of the mapmaker, would be rash to attempt, except that if he was clear, he seems to have thought that either there was a succession of portages extending all the way to the Kankakee or Huakiki; or possibly that the portage went the whole distance, although the representation of the lake would make that latter interpretation seem improbable.

Fort Creve Couer is represented as Fort Lewis, built by Mr. de La Salle, 1679. The same confusion appearing as in the statement of Lahontan, upon which Thwaites has commented. The name "Chicagou" appears stretching
4347 across the country between the Kankakee and the Lake at the south end of Lake Michigan, with certain houses apparently indicated.

Whereupon said map was offered in evidence. (For copy of said exhibit, see appendix, page)

4348 With reference to DuPratz, especially the maps which Thwaites testified concerning, and further as to the standing of DuPratz as an authority and the map which appears in his book, I call attention to Thwaites' testimony (Trans., 932; Abst., 389), where he says (reading):

4350 "The book by du Pratz falls within that class of source material which is the product of a carefully trained chronicler who stood much nearer to the event than we do," and so forth.

Further on, transcript, 934 (Abst., 390), as to the standing of the map, he stated:

"No, except that it is a very good map and seems to be a very carefully drawn map of the Mississippi basin."

At transcript 152 (Abst., 65), Alvord testified that the author DuPratz had a most excellent standing as a scholar and historian and a man of good observation. To check up the estimate, I cite 5 Winsor Narrative and Critical History, page 65, Chapter entitled: "Critical Essay on the Sources of Louisiana History" by Andrew McFarland Davis, and comment on DuPratz (reading):

4351 "The presence of Le Page du Pratz in the colony for sixteen years (1718 to 1734)"—the colony here in view is Louisiana and not Canada—"gives to his *Histoire de la Louisiana* a value which his manifest egotism and whimsical theories cannot entirely obscure. It was an authority in the boundary discussions."

There are two footnotes in the course of this short citation.

I now turn to the first, which is appended to the title of DuPratz' work, reading in part as follows:

"The original edition was published at Paris in 1758. An English version, *The History of Louisiana, or the Western Parts of Virginia and Carolina; containing a Description of the Country that lie on both side of the river Mississippi*, appeared in London in 1763 (two vols.), and 1774 (1 vol.), in an abridged and distorted form."

The latter footnote is written by Winsor.

4352 A critical estimate of DuPratz' *History of Louisiana* is "American Library Annotated Lists. *The Literature of American History. A Bibliographical Guide*, in which the scope, character, and comparative worth of books in selected lists are set forth in brief notes by critics of authority. * * * "Edited for the American Library Association by J. N. Larned. Boston. Published for the American Library Association by Houghton, Mifflin & Co. 1902."

In the list of contributors are Professor Charles M. Andrews, Edward G. Bourne, Ralph C. H. Catterall, Edward Channing and others—men of standing and authority in the field of the literature of American history.

4353 This is regarded as a standard bibliographical guide in the field of the literature of American history; used as such by workers in that field who pretend to be familiar with the literature of American history. On page 108, of this volume is an estimate of DuPratz' *Louisiana* by Grace King, who has written of New Orleans and Louisiana history; evidently selected by Larned as one competent to estimate the work of DuPratz (reading):

"One of the earliest and most useful authorities in the history of Louisiana. Coming to the colony in 1718 and remaining there sixteen years, part of the period as official physician to the royal plantation opposite New Orleans, the author had the time and opportunity to exercise his shrewd yet genial powers of observation, on the men and events about which he wrote on his return to Paris. If, when he dilates on his favorite theme, the Indians, particularly the Natchez tribe, his credulity, or his confidence in ours, appears at times excessive, and if naive gossip too often passes with him for serious proof, his genuine intention to instruct and not to deceive is ever convincingly apparent to the reader."

4354 I turn to Volume 10, of Sabin's *Bibliotheca Americana*, the title page reading:

"A dictionary of books relating to America, from its discovery to the present time. By Joseph Sabin. Volume X. New York: J. Sabin & Sons, 84 Nassau Street. 1878."

Of this volume, Winsor in his *Narrative and Critical History*, the essay on bibliographies of American history, written by Paul Leicester Ford, says: "In bibliography Sabin & Eames stand first." At page 223, is an estimate of DuPratz' *Louisiana* (reading):

"Important as showing the French claims to the southern territory now occupied by several states, but claimed also by the English under the name of 'Carolina? The author resided in Louisiana fifteen years, and it is from his relation that most of the details of the life of the Natchez and other Mississippi tribes of Indians have been derived. Later historians have availed themselves of his materials. The plates are barbarous; indeed, the 'Monthly Review,' XIX, 296, remarks, 'They remind one of the cuts in the old 'Hortus Sanitatis.' The author appears to have been a very sensible and a very worthy man, but with very little talent as a writer. His style is unequal and diffuse, and his work wants method."

4355

This criticism is appended to, and has particular bearing upon the edition of DuPratz, published in Paris, 1758. Now the criticism or comment upon the 1763 two volume English edition of DuPratz (reading):

"The long preface is the work of the English editor, who informs us that he 'has left out many things that appear to be trifling, and abridged some parts of it.' It will also be perceived, on comparison of the titles, that he has even constructed one for the work to suit himself."

4356

I conclude from this three critical estimates of DuPratz that one need not go far in his study of this work to note what authoritative historians think about it without being put upon his guard as to the necessity of using the work with caution. Dr. Thwaites' comment, it seems to me, should be considered in the light of this information. As to the maps which appear in DuPratz, I call attention to the article on *Early Maps of Ohio and the West*, volume 1, of the historical collections of the Western Reserve and Northern Ohio His-

torical Society, article No. 25, by C. C. Baldwin, frequently referred to by Winsor and Hurlbut. Baldwin estimates 4357 the work of DuPratz which is under discussion. Page 16 (reading):

"A map of Louisiana, 1757, by M. LePage DuPratz and accompanying his *Histoire de la Louisiana*, Paris, 1758, is far behind the times. Even the Dead River is raised again and called the Grand."

Evidently there is a slight error in this statement. At any rate, in the map Thwaites used, it is called the Great river in place of the Grand river (reading):

"Lake Erie has its old form of a flight of steps. He is fully up with the times in pushing the 'Montes Apalaches' pretty well east, and making them everywhere the English boundary."

The Grand or Great river there represented flows into the Mississippi somewhere south of the Falls of St. Anthony. I judge it to be the Long river of Lahontan. The inscription itself, is, "The Great River according to M. de Lahontan." In this connection, I call attention to Amos Stoddard's work, entitled "Sketches, Historical and Descriptive of Louisiana. By Major Amos Stoddard, member of the U. S. M. P. S. and of the New York Historical society. Philadelphia. Published by Mathew Carey. A. Small, Printer, 1812." This is referred to by Darby in his Louisiana, with approbation as being full of facts, but cast aside by Darby for the reason as he indicates that it is too voluminous for ordinary use; but that reason does not challenge the correctness of the work. Stoddard was appointed by the U. S. Government to take charge of Louisiana on its cession by the French of the U. S. in 1803. In March, 1804, took possession of upper Louisiana; stayed five years on various parts of lower Mississippi, and nearly six months on Red River. Such was his means of acquainting himself with Louisiana. It is modestly entitled "Historical Sketches 4359 of Louisiana," for he points out in the preface the impossibility of writing at that time an entirely accurate history of the region. Page VI (reading):

"These are some of the obstacles in the way of a regular and correct civil history of Louisiana. Those opposed to a complete geography and natural history of that country, are still more insuperable. All the old maps are extremely defective. The one prefixed to the work of DuPratz, is unquestionably the best."

I now turn to the map found in the 1774 edition of DuPratz, concerning which Thwaites testified, on transcript page 934 (Abst., 390; Appendix,), where he says:

"No, except that it is a very good map and seems to be a very carefully drawn map of the Mississippi basin."

I have shown what Baldwin thinks about it. Lake Erie appears as he said, as a flight of steps.

4360 The Wabash and Ohio are represented as one stream.

There is no bend such as one would find in the modern map of this region in the Ohio river. It is represented as flowing too closely to Lake Erie. Similarly with the Illinois, it flows in a general westerly and southwesterly direction to its mouth with no bend at all comparable to the bend which will be found over in the central part of Illinois where the river turns from its general westerly direction more especially to the south. No Wisconsin river is shown on this map. Green Bay is prolonged too far to the south, especially in view of the connection between Lake Winnebago and Green Bay. Representation of what may be taken to stand for the modern Chicago or the modern Chicago and modern Calumet rivers and the modern Desplaines is inaccurate in certain respects clearly evident to the eye.

4361 The two rivers to the south of the Wabash or Ohio, (it is labeled with both names) which apparently stand for modern Tennessee and Kentucky rivers, are very inaccurately shown. They are labeled as the river of the Chaouanons, and river of the Cherokees. The Missouri is shown from the point where the edge of the map cuts it, flowing almost due east, slightly to the southeast, to its mouth, its junction with the Mississippi. There is no indication of modern bend in Missouri at the point approximately at the western border of the State of Missouri where it turns sharply to the east, where it flowed in general southerly direction along the western boundary of Iowa. I call attention to this point by way of comment on Thwaites' estimate that this is a very good map of the Mississippi basin.

I have here a map entitled:

4362 "A New Map of Part of the United States of North America, Exhibiting the Western Territory, Kentucky, Pennsylvania, Maryland, Virginia, &c. Also, the Lakes Superior, Michigan, Huron, Ontario & Erie; with Upper and Lower Canada, &c. From the Latest Authorities. By John Cary, Engraver, 1805."

It shows the Illinois river with the River Plein and the modern Chicago river, not very inaccurately shown, that is as to the modern Chicago river. The Illinois river flows in a due southwesterly direction without any bend from the junction of the Plein and the Kankakee to its mouth, the Mississippi. The Plein calls for comment, in that its source is given some distance west of Lake Michigan, somewhat to south of Chicago river, there being a representation as to a portage between the two rivers. Sandusky Creek is connected by a portage to the Scioto River, which flows into the Ohio. The inscription appended to this portion of the map dealing with the portage between those two streams reads:

"Portage of 4 miles. Thro' the Sandusky & Sioto lies the most common pass from Canada to the Ohio and Mississippi."

4363 At the portage between the Fox and Wisconsin appears: "Carrying place $1\frac{1}{4}$ m." "From hence by the R. to the Winebago L. 180 miles." At the portage marked "St. Joseph" from the St. Joseph river to the Wabash appears the inscription "Portage 15 miles." Between the Chicago and Illinois or Plein is simply the word "portages."

Whereupon said map was offered in evidence.

(For copy of said exhibit, see appendix, page)

Cross-Examination.

4363 As to whether it is my opinion that during the period commencing in the latter part of the seventeenth century and extending to about the end of the first third of the nineteenth century, men engaged in the fur trade did not pass up and down the Desplaines river in canoes, will say that in order to answer that question I suppose I would have to go over practically all of my testimony on the direct again.

4364 I should not attempt to answer that question by a yes or no answer. I have an opinion on the subject. To state it in answer to this question I should simply undertake to summarize briefly the tenor of my testimony on my direct examination, and especially my summary of the subject which was given toward the close of my testimony just preceding the adjournment, and that is briefly to this effect: that in order to understand what use was made of the Desplaines river by travelers or traders, one must go to the sources which describe at first hand the use made of such rivers, or the passages of that river. These sources show

that at times the river was traversed—the river route was traversed in canoes. At certain times it was possible evidently for those canoes to make the whole passage in the water. At other times, and this for a very considerable part of the year, just how much I would have to refer to my testimony on my direct examination to make plain, it was not possible to make the whole or even a considerable part of the passage of the Desplaines in canoes in the water of the river. As to whether or not, then, it is my opinion that 4365 during the stated period men engaged in the fur trade did in fact, pass up and down the Desplaines river in canoes, I suppose I have just answered that question. I would not undertake to answer that question by a mere yes or no, for such an answer would be misleading, in my opinion.

Q. Do you contend that men did not pass up and down the Desplaines river in canoes during that time?

Objected to, because the witness has already answered the question.

As to whether or not men engaged in the fur trade did in fact, pass up and down the Desplaines river in canoes during that period, without regard to how many times they did it, I would say in answer to that, it seems to me I have just answered it, but if counsel wishes me to do so, I would be glad to take the record and undertake to point out just to what extent and how they did use the Desplaines river.

4366 Q. That is not what I am asking you about, Doctor. I want you to state whether it is your opinion that any man engaged in the fur trade either did or did not pass up and down the Desplaines river in a canoe, up or down.

A. We have in Marquette's account of his second journey into this region a statement concerning an attempt to pass up the Desplaines river in a canoe which failed. We have in Joutel's Journal an account of the passage up the Desplaines river in canoes; I am not sure that the men were fur traders. They were the party that was returning from the lower Mississippi river region and on this immediate journey from Fort Lewis on their way to Mackinac and Canada by way of Chicago. They used canoes along the river. It took them something like twelve days to make the passage approximately 100 miles from Fort Lewis to Chicago and they pulled the canoes in the water much of the way. I do not recall whether it is made clear that they took the canoes out of the water or whether they kept them in the water the entire journey.

Speaking from memory, I do not pretend to be able to call up every one of these various instances without reference to the record, or to my votes. I recall the case of such men as Cass, who came up the river in a canoe in the summer of 1827, at a time when it was swollen by recent rains. The case of Child, who came up the river in a
4367 canoe at approximately the same period; that is, speaking as to years, and again the river was evidently raised either by rains or by reason of the spring floods. The case of Schoolcraft, who undertook to come up the river in 1821, and failed to get even to the Desplaines river in his canoe, and made the last 100 miles approximately of the journey on horseback. The case of Perrot, who came up the Illinois river in 1783. I believe he leaves it to us to infer how he got to Lake Michigan; whether he came by the Desplaines in a canoe, or whether he came by the Desplaines at all, does not appear from the account we have of this passage. The case of Fonda, who also came up the Illinois river, the exact date I am not able to give from memory, but in the early part of the 19th century, and who also leaves us to infer or deduce, as best we may, how he made the actual passage of the Desplaines. Those, and probably there are other accounts of passages up or down the Desplaines in the period which is included in the question that has been asked. For each and everyone of these, I would have to refer to the record or to my testimony in that connection, in order to give the fuller answer.

Motion to strike out the answer as not responsive.

As to my personal opinion as to whether or not men
4368 engaged in the fur trade did at any time during the stated period ever pass up or down the Desplaines river in canoes, (counsel having explained that he means by "pass up or down" to sail their canoes on the surface of the river, or in any other way, as carrying their boats across on their backs, or by wagon or by ox cart, as the case might be), I think Graham and Philips' report amongst others, makes it plain that canoes were taken from Chicago to the Illinois. I think that other reports such as Schoolcraft's account, and I might by reflecting over the matter, refer to others, Hubbard for example, although Hubbard did not use a canoe,—show that the Desplaines was used in part and in the fashion that each of these reports makes clear. I should not undertake, as I have said a moment ago, to give a yes or no answer to this question.

As to whether I want it to be understood that it is
4369 my opinion that no man engaged in the fur trade during the period counsel has stated, floated down the Desplaines river, or up the Desplaines river in his canoe, would say if counsel wants to be technical in this matter, I would say that no man ever floated up the Desplaines in a canoe, since canoes would hardly float up the stream. I do not believe my answer or my language is fairly subject to the construction that has just been upon it in this question that has been asked me. As to whether it is my view that no man engaged in the fur trade ever used a canoe, floated in the water of the Desplaines river as a means of transportation, taking the wholes Desplaines river from the Chicago portage down, including the reverse; I think Hubbard makes it perfectly plain that Batteaux were used the whole length of the river in time of spring floods. I suppose that canoes might have been used at the same time in similar fashion.

4370 Q. Haven't you any opinion on the subject?

Mr. SCOTT. I object. He has given an opinion. When he says "I presume," isn't that the same as his opinion? He says it is.

Mr. CORNEAU. I want to know if that is his opinion.

The WITNESS. Being asked for my conclusion from all the authorities I have examined, as to whether or not men did or did not in fact pass up or down the Desplaines river in canoes, without the aid of portages, or making portages, and taking the question to mean that they have passed the whole length of the Desplaines river in a canoe in water, will say in time of spring flood it was done certainly in batteaux in the manner in
4371 which Hubbard describes. It might have been done in a canoe I should think at the same time, or in similar fashion. I do not have in mind at this moment any instance of the passage of the entire river in canoes. My opinion, I would repeat, I have undertaken to make clear in the course of my direct examination. I cannot state that opinion by simply a yes or no answer, when it required something like a week to put it in on my direct.

As to whether in my conclusion I was speaking not merely relative to what had actually been done but included in my conclusion as to what was possible to be done, that is as to whether in my conclusion I spoke not of the result of the examination of historical sources as to the actual use of the Desplaines but as they bore on my idea of what constituted capability of use and recall that distinction, would say with-

out recalling the place in the record where I made the statement which counsel refers to that my view of the matter is set forth as adequately as I was able to set it forth at that point in my direct testimony.

4372 As to whether Mr. Scott's question to which my conclusions were directed, called for my opinion not merely as to the actual use, but also as to the capability of use, I ask to be referred to the question in the record.

Whereupon counsel for the government read the following question from page 4249 of the record (Abst., 1600):

Q. Now, Dr. Quaife, I wish you would give us your summary, based upon historical sources which have come to your attention of the use of the Desplaines river and of its capability for use as indicated by these historical references.

A. I would like to have the question repeated.

(Question read.)

COUNSEL FOR THE GOVERNMENT. I might add that I am not asking you what conclusions you have arrived at, judging from recounted instances, of the use of the Desplaines, as to its capability for use either in general at all seasons or otherwise; I am asking you merely whether or not you have a fixed opinion as to the question whether or not the Desplaines was actually used by men engaged in the fur
4373 trade during the period I have stated, in canoes.

A. Now do I understand that you are withdrawing these prior questions and putting a new one to me?

Q. Not at all.

A. I should say it is impossible to answer all the points that were included in those various questions in any one answer to that question.

COUNSEL FOR DEFENDANT. Q. You began this question by saying you might add, and therefore you added it to the question that preceded it.

COUNSEL FOR GOVERNMENT. If you mean by withdrawing the former question merely those questions about the capability of use, I regarded that rather in the nature of an explanation, but I will drop the whole thing and get around to it again. Disregarding now any distinction which may exist in your mind between the actual facts relative to the use and your conclusion as to the capability of the Desplaines river for trade, is it or is it not your opinion that during the period I first mentioned men engaged in the fur trade passed either up or down the Desplaines river in canoes?

A. I do not have in mind at this moment any in-
4374 stance of such passage of the Desplaines river other
than those I called attention to in my answer a few
moments ago. I do not say that there are no such other
instances, but I spoke of those that I happened to be able
to recall at the moment, and I think of no others at this
moment. Such passage of the Desplaines river as is made
then in canoes by the fur traders in the time included in the
question would be indicated by my answer a few moments
ago. Counsel states that I have not told what my own per-
sonal opinion is, and that is what he is after. I would con-
clude that in certain seasons, certain years rather, when the
Desplaines was higher than at ordinary times, either by
reason of seasoned spring floods, or by reason of recent rains,
which had raised the water of the river, that sometimes trad-
ers passed up or down the river in a canoe, the basis of my
conclusion being just such accounts as I have referred to a
few moments ago.

4375 Cass in 1827 when the river was raised by recent
rains, succeeded in passing along the river in a canoe.
Cass was not a fur trader, however. Child at a similar time,
or at any rate when the river was similarly swelled, either
by a flood due to the spring season, or by recent rains, for
he points out, I believe, that there were two feet of water
all across the portage, and that he sailed across without re-
gard to the channel or Mud Lake, made a similar passage.
Such opinion as I have would be based upon the specific ref-
erences we have. I have now been calling attention to one
or two that show that in such an unusual time, or in such
an unusual condition of the river such a passage might be
made and occasionally was made.

In my former answer I called attention to other reports
which show that at various times during the year—and I
might add here, I believe I did not in my former answer,—
for a large part of the year such passage was impossible;
that frequently it was attempted and either given up, or
else, as in the case of the Hubbard passages, most of the
passage or much of it was made on dry land with empty
boats put on wheels or rollers, as the case might be.

If counsel wishes to make the point that I should or must
give a yes or no answer, I would say that there are many
questions, and in my opinion this is one, which does so not
permit of a yes or no answer.

4376 As to whether it is my opinion that the Desplaines was ever used by men engaged in the fur trade or otherwise, except in those instances of which we have specific accounts, I do not well see how one could base an opinion upon the use of the Desplaines, without having any experience or account to found that opinion on. If you are asking me to draw an opinion without having any authority for it, I would not undertake to do so. Counsel states that he is asking me for the conclusion which I as a historian, would draw from the fact that I find a number of instances recounted in which the Desplaines was actually used, as to whether or not it was used in other unrecorded instances. I do not recall that I have drawn any such conclusion in my testimony. I should say that the historian must base
4377 his conclusions upon the evidence that he is able to find, dealing with the subject which he had in hand, and my conclusion or conclusions as to that whole matter I set forth as adequately as I was able to in my direct testimony. By that whole matter I mean to say my conclusions as to the use of the Desplaines river, based on the various historical sources which the witnesses for the United States and other witnesses including myself, in this case, have brought forward.

Being asked to say whether or not, in my opinion as a historian, the Desplaines river was used at times when we have no record of such use, I should not care to venture an opinion upon a topic upon which I have no record whatever, no evidence whatever.

I am asked, basing my answer entirely upon the evidence which I have given, or upon the authorities to which I have referred in my direct evidence, if I now state that I can arrive at no conclusion on such facts to to whether or
4378 not the Desplaines river was used at other times than
4379 those of which we have specific accounts; my conclusion as to that I pointed out as adequately as I could in the summary, and possibly in other places, too, of my direct testimony, being to this effect, and here I shall undertake to summarize briefly from memory, that there are a large number or a considerable number at any rate, of accounts of the use of the Desplaines river and passage from Lake Michigan to the Illinois and Mississippi by way of the Desplaines, which oftentimes on the face of things are incorrect. Oftentimes by careful examination we are able to determine that the author did not have any first hand knowledge of the thing

he was talking about; and those statements must be interpreted in the light of the knowledge we get of the use of the Desplaines river in the specific accounts, first hand accounts of the passage of the river, whether in boats or on dry land, as the case may be; and my conclusion as to the whole matter I set forth as adequately as I could in my direct testimony in this connection.

4380 Being asked if I as a historian, have to find a specific account of the use, before I believe that the Desplaines was used, will say I would undertake to weigh and consider, in trying to come to a conclusion upon such a question, all the evidence that I could find or had available which seemed to me to throw any light upon it.

Being asked if, having in mind all the evidence which I have seen, and weighing it as a historian, I arrive at the conclusion that the Desplaines river was never used by traders except in those instances of which we have specific references, will say I have not, and do not now care to draw any such conclusion. I should not care to draw the conclusion that it was so used. I should prefer to base my conclusion upon the use of the Desplaines, upon the passages or the records which we have.

4381 Basing my conclusion upon the evidence that is in this case, it seems to me that the question could best be answered as I have undertaken to develop the subject of the use of the Desplaines in connection with my direct testimony. I would much prefer to formulate my conclusions upon evidence that I have, rather than upon evidence that I have

4382 not. The evidence that I have examined, does not show the Desplaines was never used at some other time, and

I do not see how in the nature of things such a showing could be expected. As to whether I draw no inference then, one way or the other, from the fact that the Desplaines was used in a certain number of instances, as to whether or not it was used in other instances, I suppose that the inference I might draw on that point would be about as valuable or about as valueless as the inference anyone else might draw from a study of the records and the use of the records that the historians have made that have already been put into the case. Counsel asks me to suppose that I was writing a history twenty years from now, and that I found letters or other accounts from travelers stating that they had gone from Chicago to New York on a railroad train, and that I found ten such letters. He then asks whether or not I would come to

the conclusion that other travelers had likewise gone from Chicago to New York on a railroad train; I suppose it would depend entirely on the nature of those letters. It might appear positively that no others had gone, that the road 4383 had been destroyed after those men had used it; supposing there was no evidence one way or the other throwing light on the question beyond the fact that those letters stated that they had gone from Chicago to New York on a railroad train, having in mind also what we know of Chicago and New York and the commercial connections between the two cities, what one man or individual has done, it is conceivably possible that another man or individual could do; that is to say, assuming that the circumstances do not appear to be such as to make it impossible for another to repeat this exploit. I should prefer to wait until the twenty years have elapsed and I have the letters before me before undertaking to say what inference I would draw in the case which counsel has supposed.

Being asked to have in mind all the information that I have gathered concerning the Desplaines river, the fur trade and other trade, the extent of travel, and any other facts that I can recall, and as to what opinion I come to, as to whether or not the Desplaines river was used by others than those who have left specific accounts of their use, will say the 4348 secondary, third and fourth hand accounts and others of a farther degree removed, to which I referred in one of my answers a few moments ago, state, many of them at any rate, that the Illinois river was used for purposes of commerce and some of them state, for example, Hutchins, that it was navigable to within a short distance of the Chicago river. There are then such historical sources, the worth of which must be determined in each individual case, by such critical analysis of the source as it may be possible to make; and the use that I would make of such sources and the use I have made of them in studying this question I have indicated both in my direct and in one of my answers a few moments ago, that they must be interpreted in the light of the first hand sources that we have of the actual passage of the Desplaines. The witnesses for the United States cited something less than twenty such sources, I believe, in a period of upward of two centuries or two centuries and a half. I did not in my study add materially to that number. Possibly I did call attention to some two or three additional accounts

which might be regarded in the same light as the first hand sources. From all of these accounts I undertook to generalize as to the nature of the use of the Desplaines river during this period.

Being asked to have in mind the secondary authorities of which I spoke and the critical analysis of them which I have made, and as to my own personal opinion as to whether or not the Desplaines was used by men engaged in the fur trade in other cases than those of which we have specific records, 4386 will say I am not aware, or not acquainted with, so far as I know, any careful and conscientious historian who undertakes to base his conclusions upon evidence which he has not got except, and this of course is true to some extent both in law and in the study of history, that absence of evidence, of negative evidence may be taken to have a certain significance. For example, if there was no account to be found of the death of a certain man who was prominent in Chicago history it might perhaps be inferred that that man was not burned at the stake on State street in Chicago. In such light as that negative evidence may be drawn upon or absence of evidence may be drawn upon, and I believe is so used by careful historians. For the use of the Desplaines river we have, as the record will show, a considerable number of sources. That being the case I would prefer and have done so I believe in my testimony on my direct examination, to base my conclusions as to that use upon those evidences that we have. Counsel asks that I base the conclusion to which I now refer, on the same evidence; I do not see how evidence, such for example, as Hubbard's, that a certain use was made of the Desplaines river, or of St. Cosme's, that it was not used when we might expect it to have been used, or of any other of the sources that might easily be cited that have been brought into this case, may be taken to show that, or should be taken to show that the river was used at some other time or in some other way than is indicated by those sources. 4387 As to whether I then have no opinion one way or the other as to whether or not the Desplaines was used in other instances than those of which we have specific records, would say that I made no such statement that I am aware of. The opinion that I have, is that based upon the sources that I have seen used in this case, and that I myself have studied in connection with this case.

Being asked to state my opinion as to whether or not the

Desplaines river was used in other cases than those in which we find specific accounts, will say I suppose if Mr. Cass could come up the river in 1827 in a canoe, it is conceivable that somebody else may have come up the river that same day or days in a canoe. Mr. Cass has left a record and others have left a record of this passage. I do not know that there is a record of the passage at the same time and in a similar manner by others. If you want to suppose specific instances such as that I suppose I can base an answer on such specific cases.

4388 Counsel states that he does not want a suppositious case, but wants my opinion as to whether or not others did do it. It seems to me I just answered that question. I might suppose a thing might be possible or conceivable without having any evidence that the thing had been done. For example; that another man than Mr. Peary could go to the North Pole, without having any evidence that another man had gone there.

Q. You have certain facts which you have examined, certain sources of information; those are speaking roughly, I won't take the time to be accurate, that you have found there was a river there; you have found that there were people in this country engaged more or less in trade; you have found that in certain cases men have used the river and have left accounts of that use. Now having in mind those three principal facts together with such others as you may have found also, do you or do you not conclude yourself that the

4389 Desplaines was used in other cases than those of which we have a specific record?

A. To draw a conclusion for the purposes of this question—for example, Marquette's Journal of his second expedition, shows that an attempt was made to use the Desplaines river in a canoe, but that it failed.

If Marquette had never come to this region, I suppose we would have been in ignorance of that attempted use of the Desplaines which he describes in that journal. It is supposable, I should say, however, that the use or attempted use of the Desplaines would have been made just the same whether or not Marquette had been here to record it or not. I suppose it is conceivable and this I think I have already stated, that it may have been used, or that attempts and failure to use it may have occurred at other times. As to whether I have any opinion as to whether or not it is a fact that I

have arrived at any conclusion from the historical sources and knowledge to which I have referred, it seems to me I cannot throw any further light on your question than I 4390 have already done. I have an opinion that, for example, the trader or the man whoever he was who undertook to come up the Desplaines in 1675, may have made that attempt without our having any record or knowledge today that he did so. That others may have done or have attempted to do the same thing without a record having been handed down. I, however, in drawing any conclusions as to the Desplaines river and the use of the Desplaines river in this 200 year period, prefer to base those conclusions on what I know rather than on what I do not know.

Counsel states that he is not asking me what I prefer to do, but that I now come affirmatively to a conclusion as to whether or not the Desplaines river was used by traders in other instances than those of which we have specific record. I suppose a man might draw an inference or deduction that it was. Being asked if I draw such an inference or deduction that it was not, I think I have not done so, so far as

I recall. As to whether the Desplaines river was, 4391 or was not used at all at other times than we have the recorded account of, I would suppose as a matter of inference and observation that that may have been the case. It seems to me that I have completely traversed the ground of this question.

Being asked what my inference is, and whether I infer such a thing, would say that I believe counsel for the United States have pointed out already in this case in the course of the cross-examination of one of the witnesses who preceded me, that it is a difficult thing to establish a negative proposition. It seems to me that this question involves the same principle, that I am being asked to establish a proposition in the absence of evidence. I have shown I think, in my answers that such use of the river may have occurred without any record of it having been left. I might come to a conclusion on that matter which would be based upon inference and deduction. It might be a valid one or it might not.

4392 Being asked to come to such conclusion, would say I would point out, as I did a few minutes ago, that the surgeon or his assistant would doubtless have made the trip in 1675, even though Marquette had not taken the trouble to have made the attempt to make the trip, or even though

Marquette had not taken the trouble to record it for our knowledge, perhaps I should say. As I said at another time, someone perhaps might have followed Cass up the river in 1827 without any record having been preserved of that thing. Many things may happen without records being kept of them, or if those records are kept, they may not be available for the student of the period or the fact under consideration. For example, many ball games are played which are not recorded; many other ball games are recorded in the columns of the daily papers and perhaps elsewhere.

Being asked to have in mind those possibilities and to make up my mind and announce a conclusion on the subject if I can do so, as to whether the Desplaines was used without any record being preserved of such use being made, I would think that that would be a probable deduction or inference; that 4393 would be as certain as I would care to make it. Being asked if that is my opinion of the matter, will say I think I have stated substantially that, or rather what my opinion is in these answers. As to whether that is the most accurate information that I can reach as to what the actual fact was,—that it was probable, will say it seems to me that I have stated as fully as may be, my opinion as to this matter, that it is a deduction that is warrantable and may even be probable that there was use of the Desplaines river, without our having a record of such use.

4394 Being asked as a historian whether I do, or do not regard that as a necessary deduction, would say, as I have been trying to point out, that it is a warrantable and a possible and presumably a probable deduction. As to the deduction which I actually make as to whether or not the Desplaines was in fact, used in cases of which we have no specific account, would say I do not think I have made any such deduction. Being asked to do so, will say I might form an opinion without being able to prove it. It seems 4395 to me I have already given that opinion thus far, that there are times we know when the river was used where, by chance as it were, we get the record of that use, and it is probable and possible and perhaps likely that it was used at other times without our having that record.

Q. Now which do you think it was, possible, probable or likely?

Mr. SCOTT. I object; the witness has said it was all three, and therefore, there is no occasion to ask him which.

A. Without meaning any disrespect of counsel whatever,

it seems to me I have fully covered that question. If counsel wishes me to make a positive statement as to negative evidence, I do not care to make it, preferring to base my conclusions upon the evidence that we have as to the use of the river.

Q. I want to know what conclusion you in fact, arrive at?

4396 Mr. SCOTT. I object, that the witness has stated his conclusion.

With reference to whether or not the Desplaines was actually used in other instances than those of which we have specific accounts, I might presume that it was. I am not prepared to say that it was in the absence of evidence to that end. I think one might draw stronger inferences perhaps; he might not be able to prove such inferences. I think that he is playing safe, as I believe Professor McLaughlin put
4397 it, to trim your statement to your evidence, and the careful historian would do that. For example, Mr. Winsor made a certain statement about the route which Marquette took on his return from the Illinois country to or in the direction of Mackinaw on this second expedition. It appeared later when he came to explain the reason for that statement, that he had purposely left out details and put it in a general way because he had no positive evidence that justified him in going into details. It seems to me there is exactly a case in point, or an illustration of the point under discussion
4398 here. The stronger inference that I had in mind when I made that statement was this, or to this effect, that one might say that it was likely; perhaps he might say it was very likely that such use of the river was made concerning which we have no record. The reasons for that and the possibilities of that I have pointed out in several of my various answers that have been made.

Q. Doctor, you have examined various sources of historical data; you have subjected many of them to critical analysis; you have submitted many of them to critical tests; you have become pretty thoroughly familiar with all the facts that we have here with reference to the actual use of the Desplaines; now will you state just what inference you draw as to whether or not the Desplaines as actually used in other cases than those of which we have recorded accounts?

Mr. SCOTT. I object, that the witness when he said he presumed it was, has fully answered the question.

4399 A. If counsel wishes me to repeat again the answers I have already given, I am willing to do that.

Q. I want a positive statement of your opinion.

Mr. SCOTT. Objected to on the ground that the witness has given it.

A. Counsel asked me a few moments ago to make the strongest inference that I would be willing to make, or
4400 to that effect; and as I drew that inference I have nothing to add I believe, to that answer. It seems to me it fully covers the question. As to whether or not I find myself unable to make up my mind as to whether or not the Desplaines river was actually used in other cases than those of which we have specific accounts, as to that, I would refer to the answer I gave a few moments ago, which I have just referred to in my preceding answer. I am unable to prove such use of the Desplaines river in the absence of any account of such use. I have pointed out what the inference might be, and to what extent that inference might be justified, or deduction, if that is preferred to the term "inference."

Being asked whether I made up my mind, or can make up my mind as to the inference about which I have been asked, will say I do not care to make up my mind to any further extent or degree than I have indicated in my answer.

4401 Q. Are you unable to state your opinion? Have you any opinion on the subject?

Mr. SCOTT. Objected to. He has stated his opinion.

Q. Are you unable to make up your mind as to whether or not the Desplaines river was in fact used—

A. Repeating in substance what I have already said, I am able to make up my mind to an inference which is possibly warrantable, and it seems to me may be said to be likely or probable, and that I have pointed out in my previous answer.

Being asked if I am able to make up my mind as to what the actual fact was, would say it seems to me I have answered that question.

Q. Read the question again.

Mr. SCOTT. There is no occasion for that. The witness says he thinks he has answered.

Whereupon there ensued a colloquy between counsel as to whether or not the witness had answered the question, and the necessity of going before the court to settle the controversy, at the conclusion of which, counsel for defendant di-

rected the witness that if he had given all the answer that he thought he was able to give to the question, that he was justified in not answering further on the repetition thereof.

The cross-examination then resumed and the question was re-read to the witness:

4402 A. Counsel apparently wishes me to say, and I mean no disrespect to counsel whatever, by way of a positive statement or conclusion, that the Desplaines river was used at times and ways concerning which we have no record. I have shown what seems to me to be the extent to which
4403 the historian may reasonably go in that matter. He may point out his inference or deduction. I do not see how the historian may positively assert, or if he does, how he may defend his assertion, that this particular thing occurred concerning which he has no evidence.

I have such an opinion as I have indicated by my answer.

I presume the Desplaines was used in cases of which we have no record. That is as far as I would care to go.

4404 As to whether as a historian, I feel myself unwarranted in saying that the Desplaines was used in other instances than those of which we have specific accounts, I would say that it was probable that it was used in such other instances basing my statement upon the facts to which I have called attention over and over again in these various answers, and which I presume I need not repeat now. I would not care to go any further than that. It seems to me that answers your question. As to whether I can make up my
4405 mind positively, I presume I might possibly do what many of our historians or supposed historians have done over and over again, make statements upon very fallacious evidence, or upon no evidence whatever, that they are not warranted in using in the way they use it. When I say I do not care to do such a thing, I do not mean that it is physically impossible for me to make such a statement or draw such a conclusion, I mean as a historian or student of history that I prefer not to make such statements upon such evidence or lack of evidence.

Being asked to tell what I have in my mind, as to whether or not the Desplaines river was used in other instances, will say when I said I presume it was, I think that covers the question exactly.

Q. You think it was. Do you think or presume?

Mr. SCOTT. I object. We shall not be haggling over "pre-

sume" and "think." I submit that we are going to end that line of interrogation right here until there is a ruling.

4406 I think I have pointed out in my direct, that I did not know of any direct evidence of the use of the Desplaines river in flat boats. I have nothing in mind to add to that statement. In the sense of such use of the Desplaines, for example, as Hubbard described, the Desplaines was certainly used by other boats than canoes. Answering from memory,

I understand that Hubbard and the fur traders with whom he was connected, used Mackinaw boats. The

4407 Mackinaw boat was a flat bottomed, flat sided boat with a sharp prow, and square stern, used on the upper Great Lakes and the rivers emptying into them. This definition I take from the Century Dictionary. There was a distinction between flat boats and Mackinaw boats, and that description would not correspond to the description of flat boats.

The French held possession of this country until its cession to Great Britian in 1763. The question being a general one I should of course say that they did engage in the fur trade, the question not referring to any particular region, as I take it. The French were engaged in the fur trade somewhere or other at a later time than 1763.

4408 I undertook to show by citations from Andreas and other sources that the fur trade in the main was closed to the French in the region of the Illinois, in general from about the beginning of the 18th century on. If the question means to ask whether any fur trade whatever was carried on in this region during that time, I could not give a negative answer; neither would I care to give a positive answer. I might draw a presumption or inference as to that. I have investigated the subject further than as to what Andreas said.

4409 La Salle came here in 1679, possibly earlier. Marquette and Joliet in 1673, and there were Frenchmen in Illinois at the time of their second expedition in 1667. Roughly from that date on they carried on the fur trade in this region until the early part of the eighteenth century, when French were shut out to large extent by wars with Fox Indians and others. There were French establishments in lower part of state during period down to 1763, and doubtless more or less fur trade there. Possibly there was fur-trade in northern part of state, but the general condition was well shown by the citation from Andreas, that in the main the

French were forced to abandon fur trade in this upper part of the state from the early part of the eighteenth century on.

4410 Without being absolutely certain, I presume there was not continuous fighting among the Indians during all of that half century.

From 1700 to 1750 there were French establishments 4411 in lower Illinois, and the war was being waged between these establishments and the Fox Indians to the north. Du Pratz, and I cite him for whatever he may be worth, written, in 1758, states that the Frenchmen came from Canada to the Illinois if they had business here, by way of the Illinois river route. Charlevoix came down the Kankakee in that period. I believe he points out that it was with great danger and fear and that he had more fear than he had the courage to show to his companion and to others, on making that passage. Complainant's witnesses testified that 4412 Gravier came down in 1700.

4413 Reverting to the question about flat bottomed boats

I refer to Imlay, 1793 edition, page 105, where the statement is made that all rivers in this country are navigable almost to their sources for flat bottomed boats during floods and for batteaux during a great part of the year. It is evident from the early part of the eighteenth century ferent or requiring deeper water than the batteaux.

My general impression is that the batteaux was somewhat similar to the Mackinaw boat, comparable in size and depth of water, but I have no definition here.

4414 I do not know what the Durham boat might have been.

I now refer to the citation from Gravier, found on transcript pages 117-118, where, addressing his revered Father he merely states he received on his return from Michilimachinack the letter that was written to him by way of the Mississippi addressed to Father Aveneau who sent it to him at Chikagoua, from which place he started in 1700 on the 8th of September to come here. I understand he was lower down on the Illinois or Mississippi at the time he wrote this letter. If he came from Chicago to this point in 1700 assuming that the Chicago was the modern Chicago, he I should

4415 presume went down through the central part of Illinois, presumably down the usual or frequently followed Illinois river route. The date of this letter is 1700, and that is the very beginning or even before the beginning of the war between the Fox Indians and the French and Illinois Indians

on the other side, and it does not seem to me that it throws much light one way or the other on the subject as to whether Gravier made a passage down the Desplaines.

4416 Q. Doctor, if I understand you correctly, it was your opinion that during the first half of the eighteenth century there was not much fur trade passing up or down through the Illinois Valley?

A. I read into the record certain sources on which I based my opinion that the intercourse between Canada and the lower Louisiana region by way of the Illinois river route was appreciably decreased during the first half of the eighteenth century as compared with what had gone before.

4417 My opinion is that there was a lessened use of the Illinois-Desplaines river route by reason of those Indian wars, that opinion being founded upon the authorities in part which I read into the record, and on certain others which I believe have not been put in. So far as the French were concerned, those wars closed about the middle of the eighteenth century.

4418 Pontiac's war occurred shortly after the English took possession of this Illinois country. The English took possession of the country in 1763. Pontiac's war immediately followed. There was no appreciable interval so far as the English war was concerned. That covered the

4419 northwest generally. In a general way that would cover any intercourse between Canada and the Illinois country because Mackinac was taken as a part of that war. Detroit was attacked and other northwest forts taken. It would naturally interfere with trade. From memory, Pontiac's war closed about 1765.

My attention is directed to DuPratz, London Edition 1774, page 182, where he states:

"In those countries there is a river, which takes its name from the Illinois. It was by this river that the first travellers came from Canada into the Mississippi. Such as come from Canada, and have business only on the Illinois, pass that way yet; but such as want to go directly to the sea, go down the river of the Miamis into the Wabache, or Ohio, and from thence into the Mississippi."

4420 My attention is also called to an extract from report of General Gage, dated Montreal, March 20, 1762, entitled "General Gage's Report of the State of the Government of Montreal," appearing on page 72 of Shortt and

Doughty's Documents relating to the Constitutional History of Canada (Canadian Archives), 1759-1791, already in evidence.

COUNSEL FOR COMPLAINANT (reading):

"As I cannot discover that the Limits betwixt Louisiana & Canada were distinctly described, so as to be Publicly known, I can only inform you, what were generally believed here to have been the Boundaries of Canada & give you my own opinion, which is drawn from the Trade that has been Constantly carried on, by the Canadians, under the authority, and permission of their several Governors. From hence I judge, not only the Lakes, which are Indisputable, but the whole Course of the Mississippi from its Heads to it's Junction with the Illinois, to have been comprehended by the French, in the Government of Canada.

4421 The People of Louisiana carry their Trade up the Missouri River, and I can't find that the Traders from that Province, ever went higher up the Mississippi, than the mouth of the Illinois River, on the Contrary, the Traders from Canada, did constantly trade above the Illinois, from their Posts on Lake Michigan, even up the River St. Croix, and the Falls of St. Anthony. And it was the Trade alone of the Mississippi Indians, which made the Post of the Bays des Puants, so very advantageous. The Illinois River, tho formerly in the District of Canada, was, after some Disputes betwixt the Governor, annexed to Louisiana. A South Easterly Line drawn from the portage, betwixt the Illinois river and the waters which run into Lake Michigan will bring you to the post of Houilliatanon upon the Ouabaches fourscore Leagues down that River; Computing from that part, where the Boats are Launched, after crossing the portage of the Miamis. This was the last Trading Post belonging to Canada on that side, & was certainly the Boundary of Canada on that side. About sixty Leagues below this Post, is the Post of Vincennes, which was served by the Traders of Louisiana, and of Course, was the Boundary of that Province. This is the best information I can procure you concerning the Limits, and what I have described to you, are thought to be the real Boundaries betwixt the two provinces."

The WITNESS (continuing): I have read over this passage.

Would require further study of it before I could say I was familiar with it.

4422 My attention is now directed to Appendix No. 4 of "A Topographical Description of such parts of North America as are contained in the (annexed) Map of the Middle British Colonies, etc., by T. Pownall, M. P. London, 1176; Appendix 4 being entitled: "Extracts from the Journal of Captain Harry Gordon, Chief Engineer in the Western Department in North America, who was sent from Fort Pitt on the River Ohio, down the said river, to Illinois, in 1776." Have seen references to Gordon from time to time. I recall generally that there was such a man.

4423 The passage I am referred to is:

"Our possession of the Illinois is only useful to us at present in one respect; it shows the Indian nations our superiority over the French, to whom they can thence perceive we give law; this is dearly bought to us, by the expense and inconvenience of supporting it. The French carry on the trade all around us by land and water. First, up the Mississippi, and to the lakes by Ouisconsinia, Foxes, Chicagon and Illinois River. Secondly, up the Ohio to the Wabash Indians; and even the small quantity of skins and furs that the Kuskuskies and Picarias (who are also on our side) get by hunting, is carried under our nose to Misere and Pain Court.

A garrison at the Illinois River and a post at le Baye, will partly prevent the first; and one at Massaie will, 4424 as has been said, stop their intercourse with the people on the Wabash, who consist of several nations."

I have seen reference to Pownall. Have not prepared to estimate it without further study. It will doubtless be used by historians in whatever way it seemed worthy upon a critical examination of it.

4425 My attention is directed to a letter from Governor Carleton to Sir William Johnson, dated Quebec, March 27, 1767, heretofore introduced at transcript page 3845 (Abst., 1456), the part reading as follows:

"Ever since my arrival, I have observed the Canadians with an attention bordering upon suspicion, but hitherto have not discovered in them either actions or sentiments, which do not belong to good subjects. Whether they are right or wrong in their opinion of the Indian Trade, I submit to those whom the King has

appointed to direct and superintend the same, but the unanimous opinion of all here, Canadians and British, is, that unless the present Restraints are taken off, that Trade must greatly suffer, this Province, be nearly ruined, Great Britain be a considerable Loser, and France the sole Gainer, as they must turn the greatest part of the Furs down the Mississippi, instead of the St. Lawrence.

4426 My attention is now called to Perrault, transcript page 185 (Abst., 79). The passage reading:

"That year there were a number of gentlemen from Montreal, who had stores at Cahokia; namely, Messrs. James Grant, Meyers, Tabeau, and Guillon, who had but little business, on account of their having arrived too late.

About the 15th of April, the packs from the Missouri arrived. Our bourgeois settled his accounts with M. Choteau, and received seventy-four packs of furs. His retail store at Cahokia produced 500 Spanish dollars, and 400 pounds of tobacco. We left Cahokia on the 4th of May, for Mackinac. My directions were to pass by Chicago, having one barge and one canoe, and to await the arrival of M. Marchisseaux at Little Detroit, in Lake Michigan, he having gone by way of Prairie des Chiens, to terminate his business with the Sauks."

I am familiar with that passage. I am not familiar
4427 with Gordon's journal. I do not mean I have never heard of it.

4428 My attention is further directed to Lee's testimony, transcript 3667 (Abst., 1389), wherein he quotes from the Cahokia records, paragraph beginning "To day the 24th of April, 1787," etc., then to transcript 3668 (Abst., 1390), the mention of Power of Attorney from Askins of Detroit, to Hugh Heward, and one from Askins, Leith, and Mackintosh of Detroit, and directors of the Miamis Company; and another power of attorney from certain other gentlemen to collect debts, etc.

4429 Have read Lee's evidence in connection with these powers of attorney. Do not know that I have looked at these particular things in the Cahokia records.

My attention is further directed to "Petition of LaCroix in Regard to Trade, October 29, 1785," taken from pages 575 to 577 of Cahokia's records, appearing at transcript pages 3671 to 3673 (Abst., 1392-1393).

4430 I have glanced through these various extracts.

4431 My attention is further directed to a letter from Thomas Bentley to A. S. DePeyster, dated August 20, 1780, 5 Illinois Historical Collections, pages 172, 173, transcript pages 3676-3677 (Abst., 1394, 1395). I know who Bentley was in a general way.

My attention is called to 5 Illinois Historical Collections, page 369, memorial of Francois Carbonneaux, to Congress, December 8, 1784, appearing at transcript pages 3678 and 3679 (Abst., 1395, 1396). I have read that.

My attention is directed to an extract from letter from Joseph Parker to President St. Clair, dated October 2, 1787, appearing at transcript pages 3678 and 3680 (Abst., 1395, 1396). I have read that.

4432 My attention is further directed to a petition to Congress dated June 2, 1786, in 5 Illinois Historical Collections, pages 381, 382, appearing at transcript pages 3681-3682 (Abst., 1397). Also to an extract from Hugh Heward's Journal, appearing at pages 190 to 193 of the transcript (Abst., 81-83). I am familiar with Heward. Have glanced through the record of Governor St. Clair to the President, taken from the report of the official proceedings in the Illinois Country from March 5, to June 11, 1790, appearing at transcript pages 204-205 (Abst., 87) St. Clair says:

"Up the Illinois river, up the Chicago and from thence by a small portage into Lake Michigan."

As far as he knew what he was talking about, I presume he meant the Desplaines. The passage indicates that he was mystified about the geography of the region.

4433 My attention is directed to a letter from G. S. Hubbard to Rufus Blanchard, dated Chicago, October 13, 1880, in Blanchard's "Discovery and Conquests of the Northwest, 1881." I know this work in a general way. In the sense that historians use all printed works that happen to be of interest, I would say they would use this. I am not commending Blanchard.

4436 The letter is as follows:

"CHICAGO, October 13, 1880.

Rufus Blanchard:

MY DEAR SIR—Your favor of the 11th is at hand, and I most cheerfully give you what information I possess on the subject matter of your note.

Prior to 1800 the north branch of the Chicago river was called by the Indian traders and voyagers 'River

Guarie' and the south branch 'Portage River.' On the west side of the north branch a man by the name of Guarie had a trading-house, situated on the bank of the river about where Fulton street now is. This house was enclosed by pickets. He located there prior to 1778. This tradition I received from Messrs. Antoine Deschamps and Antoine Beson, who, from about 1778, had passed from Lake Michigan to the Illinois river yearly; they were old men when I first knew them in 1818. This tradition was corroborated by other old voyagers. The evidences of this trading-house were pointed out to me by Mr. Deschamps; the corn hills adjoining were distinctly traceable, though grown over with grass.

I am of the opinion that these branches retained their names until about the time of the location of the first Fort Dearborn, and were afterwards known as the north and south branches.

4437 My impression is that Elijah Wentworth opened his tavern on the West Side, near the present west Kinzie street in 1830, at what was then called the Forks. About this date Samuel Miller bought a small log cabin on the opposite side of the river from Wentworth's, and south of the present Kinzie street bridge, to which he added a two-story log building, finishing the outside with *split clapboards*. These two public houses were the first Chicago could boast of. Miller by his influence and enterprise, erected a bridge built wholly of logs, across the north branch, just north of his tavern. He and Wentworth being competitors for public favor, the Forks House getting the most patronage, Jos. and Robert Kinzie built stores there, and here resorted some of the officers of the Fort daily for social intercourse and 'drinks' at Wentworth's bar. Wolves were in those days quite numerous; one had the audacity to enter in the daytime Wentworth's meat house, and was by him killed. His house had for a sign a tall sapling topped off just above a prominent branch; it extended some distance above the top of the roof, and was a conspicuous notice, to be seen from the prairie, and surroundings, that 'here was food for man and beast'; it lacked however something to hang to the branch projection, to give it character; how to obtain a proper emblem, puzzled the good landlord, as there was no carpenter or

4438 paint shop, or citizen artist; a happy thought struck him, that Lieutenant Allen might condescend to supply the deficiency, if properly approached; this was effected through a mutual friend. The boards of a dry-goods box were obtained, from which was put in shape, under the superintendence of Lieut. James Allen, a well proportioned sign, the Indian Agency Blacksmith putting to it hinges, when Lieut. Allen took it in hand again, producing and presenting to Wentworth the picture of the slethy wolf, which was to serve not only an attractive painting, but a memorial of the landlord's valor in killing alone and unaided, of a ferocious wolf. Officers and citizens received invitations to be present at the hanging of the sign; the day and hour arriving, found assembled a majority of the people; the sign was brought forth, duly veiled with a blanket, was attached to the branch of the pole, the veil removed, and it swung gracefully, and was greeted with hurrahs from those present; in turn something else greeted the hoarse throats of friends. Thus was produced and baptised the name of 'Wolf Point.'

Besides Wolf Point was a place called Hard Scrabble, of early historic interest.

Mrs. John H. Kinzie, in her book, 'Wau-bun,' correctly describes the location as 'Lee's Place.' Mack & Conant, extensive merchants at Detroit, in the Indian trade, became the owners of this property about the year 1816. They sent Mr. John Craft with a large supply of Indian goods to take possession of it, and established a branch of their house there, the principal object 4439 being to sell goods to such traders as they could, residing throughout this country, without interfering with the interest of those traders who purchased goods from him.

Mr. Craft repaired the dilapidated building, adding thereto, and erecting others necessary for the convenience of business. He, I think, named it 'Hard Scrabble'; whether he or someone else, it bore that name in 1818.

At the organization of the American Fur Company, 1816, Mr. Astor's plan was to control the entire trade by absorbing other companies doing an Indian business. He succeeded in buying out the Southwest Company,

whose headquarters were at Mackinaw, but failed in his efforts to buy out Mack & Conant.

Mr. James Abbott, however, their agent at Detroit, succeeded in buying them out in 1820 or '21, and they withdrew from the Indian trade, transferring their Indian goods, posts and good will to the American Fur, who constituted Mr. Craft their agent here, he removing his quarters from 'Hard Scrabble' to the company's warehouse located north of, and adjoining, the military burying ground. They enlarged it and built a log warehouse, besides; J. B. Beaubien, who had previously occupied it, removing to the 'Factor House,' adjoining Fort Dearborn. Craft died in the fall of 1826, and Mr. John Kinzie succeeded him. Mr. Wm. W. Wallace (who
4440 was one of Astor's men on his expedition to Columbia River) took possession of Hard Scrabble after Mr. Craft left the place, and died there during the winter of 1827-8. From that time till the land title passed from the government, it was occupied by several families, temporarily, among whom were the Lawton's, for a short time, and James Galloway, the father of Mrs. Archibald Clyborne.

Yours truly,

G. S. HUBBARD."

My attention is particularly directed to the passage beginning:

"This tradition I received from Messrs. Antoine Deschamps and Antoine Beson," etc.

4441 My attention is also directed to 3 Wisconsin Historical Collections, page 292, an extract from Augustin Grignon's Recollections, which reads:

"Chicago means the place of the skunk. I understood these animals were very plenty there. At a very early period there was a negro lived there named Baptist Point DeSaible; my brother Perrish Grignons visited Chicago about 1794, and told me that Point DeSaible was a large man; that he had a commission for
4442 some office, but for what particular object, or from what government, I can not now recollect; he was a trader, pretty wealthy and drank freely. I know not what became of him."

I have read those recollections. Grignon was an early resi-

dent of Wisconsin. I am not aware that he did or did
4443 not trade around Chicago. My impression is that he did
not. The passage says he got the information from his
brother. I believe his recollections are rather questionable
authority. I think there is such a criticism. Would have to
look it up. In a general way I have studied this particular
recollection.

4444 There was such a man as Baptist Point De Saible in
Chicago about 1794, I should say. Cannot give exact
year when he ceased to live here. Don't know what his busi-
ness was, and do not think anyone else does. I do not know
whether he was engaged in the fur trade. I made especial ef-
forts in the last eight months to run down all I could about
this man and the sum total is exceedingly brief and largely
unreliable. Heward says he was here in 1790, and evidently
did some trading with him. Not fur trading, however. Mrs.
Kinzie gives a traditional account of this man, which most
historians copy without criticism. I would want to corro-
borate her statements about him before accepting them.

4445 Such a man was here perhaps two decades, about 1780
to 1800, or part of that time. Tradition says he was a
half breed negro, a San Domingan, although it is questioned
by some writers, and that he lived here and tried to make him-
self Indian chief. He was here evidently during Revolution-
ary war. May have engaged in fur trading, or been president
of the village. Without referring to my sources, could say
nothing further. Don't know whether or not he was engaged
in trading.

4446 Am not ready to formulate an opinion upon that.

4447 I say he did trade, according to Heward, but speaking
of a fur trader, I think Heward does not show that he
carried on such trade himself. I have an impression that he
may have traded.

4448 My attention is called to 18 Wisconsin Historical Col-
lections, pages 439-440, a letter from John Edgar to
George Rogers Clark, dated October 23, 1786, which is as fol-
lows:

"SIR—I recd. yours by Express of the Eighteenth
Instant and Observe the Contents of your Letter and
am very happy to find that you put Confidence in me.
There is nothing that I would not do to Serve General
Clark, & my Country.

And you may Depend on me that I will Execute your

Order or any other Orders, that you may think proper to enfaire on me, to the last title that is in my power. the inhabitants of these Villages is very much disaffected to the United States, owing much to the Michilimackinac Company, which holds a large Trading House at Cahokia for the supply of the Savages.

If any thing tourn up in the Illenois of Consequence I shall immediately give you the intellegance by Express.

I am Sir your most Obedt. & Humble Servt.

JOHN EDGAR.

4449 N. B. This Country is totally lost if we have not Government established here soon, etc., etc., I was obligd. to give St. Ange a horse as the one he brought give out.

Kaskaskies 23d. Oct. 1786.

George R. Clark Esqr. Post Vincent."

The WITNESS (continuing): My attention is further directed to note No. 53 on page 439 of the foregoing which reads as follows:

"53. The origin of the Mackinac Company is obscure. In 1779 the majority of the merchants trading at Mackinac formed themselves into a 'General Store' to protect their goods and traders from the ravages of the Indians who had gone over to the Americans; but this association only lasted a year (until July 31, 1780)—see Mich. Pion. and Hist. Colls., x pp. 305, 367, 499, 600, and Canadian Archives, 1888, p. 61. Before the treaty of Paris had been formally signed, Mackinac merchants had established themselves at Cahokia, with a view to the Missouri River trade, and to dealings with the merchants of Spanish Louisiana; see narrative of J. B. Perrault in H. R. Schoolcraft, Indian Tribes (Philadelphia, 1853), iii, pp. 353-356. The company seems to have been formed about 1784, contemporaneously with the North West Company, and appears also to have been composed of much the same mercantile firms; although some members of the Mackinac Company, such as James Aird, Charles Patterson, and Robert Dickson were not members of the North West.

4450 The Mackinac Company operated almost entirely in American territory, from Cahokia on the south to the sources of the Mississippi on the north; and by means of St. Peters River did a considerable business in Spanish Louisiana, reaching out toward the farther Sioux branches—Yankton and Teton. They operated through

all of Wisconsin, northern Illinois, Iowa, and most of Minnesota. After the Americans took possession of Mackinac, the company continued to operate, having rights under the clause of Jay's treaty protecting the British fur-trade. The British post was on the island of St. Joseph's, but most of the merchants still maintained some kind of establishment on Mackinac Island.

- 4451 After the Louisiana purchase, Lieut. Zebulon M. Pike was sent up the Mississippi to warn British traders from the west side of the Mississippi; not being included in the treaty of 1794, the Americans claimed that the British had no right to enter here. He found several trading-houses, flying British flags, which were ordered to be taken down. With the growing irritation between the United States and Great Britain, the situation of British traders on American territory became more and more difficult. In 1807 a convoy of the Mackinac Company was fired upon on Lake Ontario; see Mich. Pion. and Hist. Colls., xxv, pp. 250-258. The following year, John Jacob Astor, an American citizen organized the American Fur Company, and three years later bought out the interests of the Mackinac Company, consolidating it with his own, and forming the South West Company. He is said to have accorded one-third of the stock of the new company to four Prairie du Chien traders, Robert Dickson, Joseph Rolette, Murdoch Cameron, and James Fraser, formerly of the Mackinac Company. The War of 1812-15 suspended the operations of the South West Company, which in 1816 was reorganized as the American Fur Company, and began its later and better known career. Many of its chief traders and clerks were, however, former British subjects who had learned the business with the North West and Mackinac companies. The store at Cahokia was probably abandoned when St. Clair organized the Illinois country as part of Northwest Territory (1790).—Ed."

- 4452 My attention is further directed to Hamilton's Life of Hubbard, page 23 and 24, the passage beginning "It was my good fortune to form the acquaintance of Mr. Des-
4453 champs"; also to a letter from Burnett, to William Hands, of Detroit, dated St. Josephs, February 2, 1790, appearing at pages 56 and 57 of Chicago Antiquities, by Hurlbut, Chicago, 1880, which reads as follows:

"Ducharme that has been here lately, says that some

of the Traders from Makina, going down the Illinois river last fall, was pillaged by a band of Poutawatamies. Let me know if you have had any news of the prices of peltries, and what appearance there is of sales."

4454 Also a letter dated May 6th, 1790, from Burnett to Hands, on page 57 of the same work, which reads as follows:

"ST. JOSEPHS, May 6th, 1790.

DR. HANDS:

This is the third letter since I saw you last fall, at La Glaize, and has not been favored with any from you. I have nothing to write you in particular at present, but only to let you know that I am safe arrived from my wintering quarters, and all very well. I have missed a very great opportunity of doing well for the want of goods this spring. About ten days ago, I sent a canoe off for Makina loaded with corn for Mr. Todd. Should not the canoe find Todd, I have wrote Mr. Barthe to receive it for him. I wrote to you about getting plough share made; send it Makina with three bushels of fall wheat, provided you have not sent it to the Aumies already. Let me hear from you by the first opportunity, and what appearance there will be of the sale of peltries.

I received a letter yesterday from Chicago, wherein it is said that nothing is made in the Mississippi this year.

I remain sincerely yours,

WM. BURNETT."

4455 My attention is directed to document appearing in American State papers, Volume 5, Indian Affairs. Volume I, page 803, which reads as follows:

"At a large meeting of the inhabitants of the county of St. Clair, Illinois Territory, where Colonel William Whiteside was conducted to the chair, and Samuel D. Davidson, Esquire, appointed Secretary:

4456 Resolved, unanimously, that the following memorial be presented to Ninian Edwards, Governor of the Territory aforesaid, as the joint sense of the meeting, to be signed by the chairman; which humbly sheweth, that we are highly gratified with the prompt, speedy, and prudential manner in which your Excellency has issued your orders for the defense of the exposed frontiers of said country, to oppose the repetition of Indian hostilities; and that we have the utmost and incontrovertible con-

confidence in your abilities and patriotism, for our safety in the present alarming times, as the constitutional channel between the General Government and us; Wherefore, we confidently request of your Excellency to forward the annexed memorial to the President of the United States, with such statements as may appear reasonable and just, to gain the object prayed for, as we are confident your Excellency must feel and see with us, that one or more garrisons, established and defended by the regular veterans of the United States, would be of the utmost safety to the extensive and exposed frontiers of both the Louisiana and Illinois territories, in a more particular manner as the great and numerous tribes of Indians, who had the hardihood and insolence to wage war against the United States, (and, in some instances, with effect) a few years since, that by the treaty of Greenville, and other subsequent treaties, have relinquished their title to their former hunting ground, which is now transformed into substantial plantations, and are changing their habitations fast from the lakes and waters of the Ohio, down the Illinois river to the Mississippi, where, undoubtedly, it would be necessary to establish a fort, in order to set reasonable bounds to their savage fury and unprovoked disturbance; we beg leave to refer your Excellency to a view of the great and manifest benefits lately
4457 obtained by the garrison established far up on the two great rivers, several hundred miles above their junction, when, before the establishing of these strengths, there did not a season pass by but some innocent person fell a victim to savage barbarity, on both sides of the river, and we confidently believe it would have the same salutary effect, in establishing one fort or blockhouse on the first eminence above either the mouths of the Missouri or the Illinois rivers, and another in the seditious village of Peoria, the great nursery of hostile Indians and traitorous British Indian traders; we hope it will not be thought superfluous to mention, that the above request is not to gratify our pride or avarice, in obtaining military pomp to decorate our streets, or the expenditure of public money to buy our produce, but it is to keep the improving citizen in peace, on a remote region from the United States, who is now working to convert the fertile and extensive plains of the Mississippi into the fairest portion of the Union.

From different circumstances the inhabitants of this country are not in possession of a sufficiency of arms to repel any attack that may be offered; owing to the present alarm, it is not in our power to buy any, and a considerable portion of the militia are not circumstanced to buy. If your Excellency will be pleased to make use of your good office to obtain from the General Government
4458 the use of what rifles and muskets may be thought, in your wisdom, needful, it certainly would be of great service to this frontier country.

(Signed) WM. WHITESIDE,
SAM'L D. DAVIDSON."

There is no date to the letter. In the upper left hand corner of the page appear the figures 1812.

My attention is also directed to a letter from William Henry Puthoff to Governor Lewis Cass, dated Michillimackinac, June 20, 1816, appearing in 19 Wisconsin Historical Collections, pages 417 to 424, reading at page 421 as follows:

"The Indians who have lately attended here in Council from Green Bay, Prairie du Chene, etc., are now at Drummonds Island they have promised to call on their return and report what shall be said to them there, how sincere they may be in this promise, or how far their reports may be relied upon, is perhaps in some degree doubtful, Yet I am inclined to believe much important information may be collected from them. A party (of) Wynebagoes who had left this Post from (for) Drummonds Island
4459 the day or two previous to my arrival, have since returned here and proceeded on to their Summer residence near the Green Bay. They report that the British detained one Canoe of their Young Men, until they should hear from the King, when these young men, so detained are to return to their nation with the news. Many of the traders have been extremely active in the Chicago and Green Bay Countries, in souring the minds of the Indians, encouraging the disaffected, exciting their fears and preparing them to oppose the establishment of American posts at for one year longer in their Country."

My attention is directed to the preface of this volume by Reuben Gold Thwaites, editor, who says, after speaking of the journal of Francois Victor Malhoit:

"One of the interesting features illustrated by Malhoit's Journal is the compensation created by the rivalry of the two great fur trading companies of this time; and

their final coalition into one monopoly. The heyday of the northwest fur-trade was the period of the formation and growth of these organizations, roughly covered by the dates 1778 to 1815. The documents succeeding Malhoit's account, have been selected as further illuminating this period. As in the preceding three volumes of the collections, and for the same reasons, the Editor has found it impracticable strictly to limit the range of his material to the present boundaries of Wisconsin. It has been necessary to consider the region of the upper Great Lakes as the geographical unit within which Mackinac and Wisconsin traders operated. The district was reached by two principal routes; that of the lower Great Lakes, and that of the Ottawa and French rivers and Georgian Bay. About the close of the 18th century, however, there came into common use a third route, via Lake Ontario and the portage from Toronto to the lower arms of Georgian Bay. Detroit was the natural emporium for the lower lakes route, and Mackinac for the two via Georgian Bay. After the latter stronghold fell into American hands, the British entrenched themselves some forty miles to the eastward, on St. Joseph Island. But their fur traders still resorted to Mackinac, and sent thence canoes to Sault St. Marie, and the Superior posts, to Green Bay and the Mississippi (via the Fox-Wisconsin portage), to the lesser lake posts at Milwaukee, and Chicago, and to trading stations on the Michigan rivers of Grand and Kalamazoo."

I do not recall the name of William Henry Puthuff.

From page 407 of that volume, the following is read to me about Puthuff from note 55:

4461 "Maj. William Henry Puthuff was a native of Virginia, probably from Albermarle county. Having removed to Ohio, he enlisted (1812) as a volunteer, but was (May 20, 1813) made Captain in the 26th Infantry of the regular army. In February, 1814, he was promoted to a majority in the 2nd rifle regiment, being employed in the neighborhood of Detroit, where in the summer of 1815 he was in command, and received the thanks of the citizens for his spirited enforcement of their rights—See Mich. Pion. and Hist. Colls., VIII, p. 655. Having been honorably discharged from the army, at the reduction of its force, he was given an Indian agency and stationed at Mackinac, where he arrived in the late summer, or

early autumn, of 1815. He was particularly suspicious of British influence, and his reports are stigmatized as untrue in the letters of the officers of Drummond Island—See *Id.*, XVI, pp. 369-401. He entered upon his duties with great zeal, and was president of the village (1817-21, 1823), justice of the county court (1818), and probate judge. In 1818, he was relieved from duties as an Indian agent, but continued to reside at Mackinac, where in 1822 Henry S. Baird found him exercising kindly hospitality—See *Wis. Hist. Coll.*, VII, p. 429. His death occurred Nov. 24, probably of the year 1823.—Ed.”

4462 My attention is directed to letter from William H. Crawford to Governor Cass, 19 Wisconsin Historical Collections at pages 405 to 407, which has been read to me as follows:

“DEPARTMENT OF WAR, 10th May, 1816.

SIR—I have the honor of transmitting to you the copy of an act of Congress, passed on the 29th of April last, intended to subject the right of foreign merchants, to trade with the Indian tribes within the limits of the United States, to the absolute control of the President. It is deemed expedient that the power vested in the President by this act, shall be exercised with a view to secure to our savage neighbors a regular supply of those articles which their wants and habits have rendered indispensable. This supply must be furnished by the government, by the individual enterprise of American citizens, or by foreigners. The fund hitherto employed by the government for this object is wholly incompetent for this supply. The tribes which have been usually supplied by the traders in the employ of the North West Company, reside far in the interior to the north and to the west, and, as is generally understood, have had but little intercourse with our trading establishments, and have seldom, if ever, been visited by our licensed traders. It is therefore wholly improbable that the enterprise of American citizens will furnish an adequate supply to
4463 those remote tribes. The want of Capital in the hands of men accustomed to the trade, and who have enterprise to bear the fatigues, and brave the dangers incident to its prosecution, will, it is believed, render it necessary for the present to permit foreigners to carry on this trade, under such regulations as shall subject them to a strict observance of the laws of the United States upon

this subject; secure their exertions in maintaining peace between the Indian tribes, and this government, and between themselves; and present additional inducements to respect the laws against smuggling. The more effectually to secure these results, the President has judged it expedient to vest in the Governor of the Michigan Territory, and in the agents for Indian affairs at Michilimackinac, Green Bay and Chicago, the exclusive right of granting licenses to foreigners to carry on this trade. In the execution of this trust, you will necessarily enquire into the character of those who apply for permission to embark in this commerce. Where the character of the applicant shall not be above suspicion, a license must be refused. The charge of having been concerned in smuggling supported by colourable evidence of its truth, will be a sufficient cause for a like refusal. Licenses when granted are to be revoked for any of the causes which would justify their refusal in the first instance. Previous to the delivery of any license, the applicant shall
4464 give bond and security in a sum equal to one-fourth of the capital which he shall state upon oath, he intends to embark in the trade, which shall be forfeited to the use of the United States, upon the violation of the laws of the United States regulating trade with the Indian tribes. He shall at the same time give the description of the persons he intends to employ in the prosecution of his business. When any application for a license shall be refused, immediate notice of such refusal, and the grounds upon which it was made, shall be given to the agents to whom the execution of this law is specially entrusted by the President. It shall be the duty of the officer granting any license to give immediate notice to this department, to the Indian agents, the collectors of the customs, and to the commanding officers of posts and stations in and adjoining the Indian country, upon whom the execution of the act in question can, in any degree, possibly devolve. This notice shall contain the description of the person, his place of residence, and the amount of the capital which he intends to employ, and the number, names, and description of the persons who will be employed in the transaction of his business with Indians.

Copies of the several acts regulating trade with the Indian tribes are forwarded, to be given to the persons

to whom licenses shall be granted for the regulation of their conduct. I have the honor to be etc.

WM. H. CRAWFORD."

4465 Crawford was in the cabinet about that time, 1816. Speaking from memory, I believe he was secretary of war.

My attention is now directed to a series of letters between Major Irwin, and Colonel McKinney; letters of the former being dated Green Bay, and those of the latter Office of Indian Trade, apparently at Washington, 7 Wisconsin Historical Collections, pages 270 to 282. The first letter dated March 10, 1817, from Irwin to McKinney has been read to me to state the reason:

4466 "Why so little business has been done at this factory during the winter; and, without going into a detail of minor reasons, I believe the principal ones will be found to be these: 1st, the admission of many British traders, who have been accustomed to do business in this quarter, and who placed themselves in the most advantageous places for business within fifty, seventy, and one hundred miles of this; 2nd, the hints given the Indians by these traders to follow them, lest the American might punish them for their recent bad conduct during the Late War; 3d, the practice (conducted secretly) of vending whisky; and 4th, the prejudices excited by the traders against our factories.

I recognize among them many who were openly and highly instrumental in exciting the Indians of our Territory to rise in arms against us during the Late War. I think, if British traders are to be admitted to trade with Indians, regard should be had to their past, or, at least, a guarantee should be given for their future conduct."

A letter from McKenney to Irwin, dated Office of Indian Trade, May 28, 1817, page 272, has been read as follows:

"Such of the British traders as you recognize as having been hostile to us during the war, report to the Agent, and transmit me copies of your remonstrance which I will take care, in case he should omit or forget to act, to hand in to the War Department. Specify in your statement that the Agent receives fifty dollars for issuing a license, and I will report upon it.

The Indian agents in this quarter, contrary to custom, exact fifty dollars from each private trader, Brit-

4467 ish or American, for each annual license, which is considered as a perquisite of office, notwithstanding they are salary officers."

My attention is next directed to a letter from Irwin to McKenney, dated Green Bay, September 29, 1817, 7 Wisconsin Historical Collections, 273, which has been read as follows:

"Several applications were made by American citizens to obtain merchandise for the purpose of supplying the wants of the Indians; and presuming it to be the intention of the Government to have the Indians supplied by them, I encouraged, after the receipt of your said letter, the application of Lewis Rouse and Thomas P. James, who incurred considerable expense in making the preparatory arrangements for that purpose.

They had, too, an assurance from the Indian Agent here that he would not license British subjects to trade where they intended to establish themselves. Mr. Rouse was to supply the Indians at or near the Ouisconsin, and Mr. James those at Menomonie River, and intended to send a person to Winnebago Lake. A few days previous to their departure for those places, information was received that a number of British traders, licensed by the Indian Agent at Mackinac, were on their way to trade with the Indians at the place to which Mr. Rose and Mr. James intended going; and a confirmation of it soon after, came in a letter from the Governor of Michigan Territory to the Indian Agent at Mackinac, informing
4468 him that he had received a letter from the Secretary of war, stating that Mr. John Jacob Astor had purchased the whole of the interest in the late Southwest Company, and wishing every facility to be given him in carrying on his trade with the Indians; in consequence of which, the Governor directed the said Agent to license all persons that the agent of Mr. Astor should name to him. Mr. Astor's agent is a Mr. Crooks, a known and professed British subject, who named to the agent at Mackinac a number of persons (all British subjects), whom the Agent licensed. Several of them came to this place for the purpose of trading with the Indians at the Ouisconsin, and other places.

This at once would have determined Mr. Rouse and Mr. James to abandon their undertaking; but they had engaged the necessary number of persons for the usual period, (six months,) and incurred other expenses. They,

therefore, determined not to abandon their undertaking, although they feel persuaded it will eventually be a bad business, as they think they are not able to cope in business with old and experienced persons, personally acquainted with the Indians, Etc.

4469 Should they be correct, I fear it will be difficult to persuade other American citizens to undertake to supply the Indians in this quarter. Besides the British traders licensed to trade at the Ouisconsin, others were licensed by the Agent at Mackinac to trade at the Upper Mississippi and this place, at which, in the village alone, six are licensed; and all of them, with one exception, held commissions during the Late War, are influential with the Indians, and were named by me in my letter of the 24th of July last to the Indian Agent here, a copy of which I transmitted you.

The persons engaged by the American house of David Stone & Co. were British subjects; and they were, I understand, licensed by the Agent at Mackinac. Governor Clark last year directed the stoppage of British subjects entering the Mississippi; Governor Edwards requested the Agent at Chicago to prevent them from entering the Illinois. What reasons exist for allowing them to trade with the Indians in this quarter, I am at a loss to imagine.

It is well known it is not necessary to license British subjects to trade at Mackinac, as very little business is done there by the Indians; and if it were greater, the American storekeepers could attend to it. At Chicago, the Factory used to supply all the Indians in that quarter; and, it can be well established, that it is wholly unnecessary to license a single person at this place, for last year a British trader (Peter Grignon) supplied all the Indians at or near the Ouisconsin, and another (Peter Powell) those at Menomonie River; and the trade of this village was attended to by two or three British subjects, who, altogether, did not make twenty packs."

4470 Attention of the witness was then called to letter from Irwin to McKenney, 7 Wisconsin Historical Collections, page 275, which reads:

"It appears that the Government has been under an impression that the Southwest Company, of which Mr. John Jacob Astor is the head, is strictly an American

company; and, in consequence, some privileges in relation to trade have been granted to that Company, and of such a nature as to put it out of the power of any person concerned in fur companies, who, if they consulted their interest, would whilst the British possess influence over the Indians, employ none but British subjects."

My attention is now called to letter from Governor Cass to A. J. Dallas, acting secretary of War, dated June 20, 1815, set out at transcript pages 226 to 230 (Abst., 98-100), which begins:

"Sir, I had intended by this time to have submitted to you a general view of the State of Indian Affairs" etc.

4471 I have read the letter, as it appears in the record.

The attention of the witness was then called to letter from John Kinzie to Governor Cass, Detroit, July 15, 1815, transcript pages 230 to 234 (Abst., 100-102), the last paragraph beginning:

4472 "The above statement you may rely is correct, having resided many years in the country," etc.

The government trading or factory system was inaugurated probably about 1795. My impression is that the Chicago factory was established about 1808.

Counsel for complainant then read from Johns Hopkins University studies in Historical and Political science, 9th series, 11 and 12; a Study of the Trading Post as an Institution by Frederick J. Turner, Johns Hopkins Press, November 4473 and December, 1891, page 59:

"The objects of Congressional policy in dealing with the Indians were stated by Speakers in 1794, as follows: 1. Protection of the frontiersmen from the Indians, by means of the army. 2. Protection of the Indians from the frontiersmen, by laws regulating settlement. 3. Detachment of the Indians from foreign influence, by trading houses where goods could be got cheaply."

4474 The WITNESS (continuing): The factory system remained in existence at Chicago until about 1822.

I have in hand a cover of papers labeled: "Copies of letter book papers of American Fur Company at Mackinac. Gift of Estate of Mrs. M. A. Hubbard, 1909," which came from the files of the Chicago Historical Society. I translate a letter dated Michillimackinac, June 22, 1817:

"Monsier Daniel Bourasse:

I am very anxious to learn the arrangements which

you have thought proper to make with the goods which were conveyed or given to you by Mr. Rocheblave for the Southwest Company. As I am persuaded that you have not been very well treated in this affair, this is to ask you to take advantage of the first opportunity which presents itself to come here, in order that on the arrival of Mons. Buisson and his associates, we can settle this affair in the most equitable manner.

- 4475 Your character hardly permits me to have any bad opinion of you, but this, which is very just, you will give us by your presence here, the necessary knowledge for us to obtain our rights of these gentlemen.

Hoping for you by the return of the Baltimore, I am,
Your obedient servant,

RAMSEY G. CROOKS."

Crooks was agent of the Astor Fur Company, at Mackinac. Have seen the name Bourasse. Should not undertake to locate him further without looking the matter up. The
4476 letter would indicate that these men had business relations of some sort.

Whereupon counsel for complainant read an extract from Schoolcraft's Personal Memoirs "In residence of 30 years with the Indian Tribes," etc., 1851, pages 112 to 117, dated 1822, as follows:

- 4477 "Sept. 1st. Indian Trade.—Congress has provided a code of laws to regulate this, the object of which is a good one, and the provisions of the various enactments appear to be founded on the highest principles of justice and benevolence. It is still a question, it appears to me, whether some of these provisions do not merely sanction by the forms of law what was formerly done, not always well, without it, and whether the measure of protection which they afford to the tribes against the cupidity of the whites is very efficacious. It was heretofore pretended by the British traders that all this country belonged to Great Britain, and they told the Indians that the war of 1812 would settle all this. It did so; but, contrary to their wishes and the predictions to the Indians, it settled it precisely on the basis of the treaty of 1783, which ran the boundary line through the straits of Saint Mary's and Lake Superior to the Lake of the Woods. As soon as the smoke of the war cleared off, namely, in 1816, Congress enacted that British traders and capital should be excluded from the American lines, that no British

subjects should receive licenses to trade, and that all such persons who went inland in subordinate capacities should be bonded for by the American traders who employed them. This law seemed to bear particularly on this section of country, and is generally understood to have been
4478 passed to throw the Old North West Company, and other British traders, trading on their own account, out of this hitherto very lucrative branch of trade. John Jacob Astor, of New York, went immediately to Montreal and bought out all the posts and factories of that company, situated in the northwest, which were south of the lines. With these posts, the factors, trading clerks, and men were, as a matter of course, cast on the patronage and employment of that eminent German furrier. That he might cover their employment he sent an agent from Montreal into Vermont to engage enterprising young men, in whose names the licenses could be taken out. He furnished the entire capital for the trade, and sent agents, in the persons of two enterprising young Scotch gentlemen, from Montreal and New York to Michilimackinack, to manage the business. This new arrangement took the popular name of the American Fur Company. In other respects, except those related, the mode of transacting the trade, and the real actors therein, remained very much as they were. American lads, whose names were inscribed in the licenses at Michilimackinack, as principals, went inland in realty to learn the business and the language; the engagees, or boatmen, who were chiefly Canadians or metifs, were bonded for, in five hundred dollars each. In this condition, I found things on my arrival here. The very thin diffusion of American feeling or principle in both the traders and the Indians, so far as I have seen them, renders it a matter of no
4479 little difficulty to supervise this business, and it has required perpetual activity in examining the boats and outfits of the traders who have received their licenses at Mackinack, to search their packages, to detect contraband goods, i. e. ardent spirits, and grant licenses, passports and permits to those who have applied to me. To me it seems that the whole old resident population of the frontiers, together with the new accessions to it, in the shape of petty dealers of all sorts, are determined to have the Indian' furs, at any rate, whether these poor red men live or die; and many of the dealers who pro-

fess to obey the laws wish to get legally inland only that they may do as they please, law or no law, after they have passed the flag-staff of Sainte Marie's. There may be, and I trust there are, higher motives in some persons, but they have not passed this way, to my knowledge, the present season. I detected one scamp, a fellow named Gauthier, who had carried by, and secreted above the portage, no less than five large kegs of whisky and high wines on a small invoice, but a few days after my arrival. It will require vigilance and firmness, and yet mildness, to secure anything like a faithful performance of the duties committed to me on a remote frontier, and with very little means of action beyond the precincts of the post, and this depends much on the moral influence of the Indian mind of the military element of power."

4480 Thereupon counsel for complainant read letter from the writings of Thomas Jefferson, collected by Paul Leicester Ford, Volume 9, 1807-1815, Knickerbocker Press, 1898: "To Meriwether Lewis.

"Washington, July 17, 08

"Dear Sir,—

Since I parted with you in Albemarle in Sep. last, I have never had a line from you, nor I believe has the Secretary of War with whom you have much connection through the Indian department. The misfortune which attended the effort to send the Mandane Chief home became known to us before you had reached St. Louis. We took no step on the occasion, counting on receiving your advice as soon as you should be in place, and knowing that your knowledge of the whole subjects & presence on the spot would enable you to judge better than we could what ought to be done. The constant persuasion that something from you must be on its way to us, has as constantly prevented our writing to you on the subject.

4481 The present letter, however, is written to put an end at length to this mutual silence, and to ask from you a communication as to what you think best to be done to get the chief & his family back. We consider the good faith, and the reputation of the nation, as pledged to accomplish this. We would wish indeed not to be obliged to undertake any considerable military expedition in the present uncertain state of our foreign concerns & especially not until the new body of troops shall be raised.

But if it can be effected in any other way & at any reasonable expense, we are disposed to meet it.

A powerful company is at length forming for taking up the Indian commerce on a large scale. They will employ a capital the first year of 300,000 D. and raise it afterwards to a million. The English Mackinac company will probably withdraw from the competition. It will be under the direction of a most excellent man, a Mr. Astor, Merch. of New York, long engaged in the business & perfectly master of it. He has some hope of seeing you at St. Louis, in which case I recommend him to your particular attention. Nothing but the exclusive possession of the Indian commerce can secure us their peace."

4482 The WITNESS (continuing): Mons. Buisson is probably the same man referred to in the Hubbard letter to Blanchardas Mons. Beson. This being a French name, he might very well have misspelled it. Mr. Sarah is probably the same man elsewhere spoken of as Cerre at St. Louis. I rely largely upon the complainant's witnesses for that information.

Whereupon counsel for complainant called the attention of the witness to and read from a letter of Ramsey Crooks to Nicholas Boilvin, dated Michillimackinac, August 9, 1818, Chicago Historical Society Collection of copies of letter book pages of the American Fur Company at Mackinac, as follows:

"A species of civil war has already been too long waged by the St. Louis interest against that of the Lakes. Our rights to the Indian trade are precisely the same, and surely the men of Mackinac are entitled to equal protection and advantage with those from the Illinois Country. If we happen to be opposed in trade, I do not
4483 think it follows we should be personal enemies. It shall be my study to avoid it, and my only wish is that harmony may take the place acrimony had usurped, and let the traders fail or succeed, as their arrangements are good or bad. We ask nothing for ourselves from either the civil or military authorities of the country which we would for a moment wish to be withheld from the others. We are justly entitled to equal privileges with our opponents, and we can never consent to have them abridged or in any manner impaired.

I am, dear sir,

Yours truly,

"RAMSEY CROOKS."

The attention of the witness was next called to the passage at page 168 of the Navigator 1811:

"The Illinois is a fine navigable river, interlocking by a portage of four miles with the Chicagow, a short river which empties into Lake Michigan, through which channel the great route of the fur and peltries trade is carried on between St. Louis and Michillimackinack and the other northern lakes."

4484 Chouteau, I suppose was a member of the St. Louis family of fur traders. I do not know the detail as to this particular designation Berthold & Chouteau. I would say that the American Fur Company carried on very extensive operations in the fur trade through the Illinois region and from Mackinac, but do not think it had a practical monopoly from the time it was organized.

4485 I do not think Kinzie was engaged in trade at that time except as an officer of the government. About that time Kinzie entered the government service. Kinzie sent 4486 furs to Mackinac. It was one of his markets. I presume it is a fact that the American Fur Company were the largest fur traders in that region after 1818. And I suppose they traded throughout the northwest. According to Hubbard, from 1818 they had many posts along the Illinois river, and were trading regularly in that country, though they did not have the trade all their own way in that section. Hubbard makes it clear they had competition. If the Kinzie & Forsyth firm are still in existence from 1818 on, and trading around Peoria, I am not aware of it. I think it was not.

4488 On page 121 of Hubbard's life, it appears that Chouteau of St. Louis invited Hubbard to enter his employ at the expiration of his engagement with the fur company. Being in trade at St. Louis, and very aggressive traders, the houses of Chouteau would not allow the American Fur Company 4489 any entire monopoly of the Illinois country. Hubbard also speaks of an opposition trader at Bureau Post named Bourbonais, who was supplied with goods from St. Louis, and he located there. He speaks of his contest with Bourbonais, and against him, to gain the goods of the Indians. Hubbard's life, page 23 (reading):

"Mr. Deschamps had been educated at Quebec for a Roman Catholic priest, but, refusing to be ordained, he, at the age of nineteen, engaged himself to Mr. Sara, a fur trader at St. Louis, and had devoted many years of

his life to the Indian trade on the Ohio and the Illinois river."

4491 As to whether I believe Hubbard's statement that Deschamps told him what Hubbard says Deschamps told him, this letter written in 1880 deals of events that happened over 100 years before, all of them 50 years before the letter was written. It should be subjected to careful scrutiny. Some of the statements are doubtless valid, and some are probably not. He speaks of tradition he received from Deschamps sometime after 1818 when they met.

4492 Hubbard wrote as an old man, and any historian would subject such statement appearing under such auspices to careful scrutiny. Our criticism of Hubbard's account of Cass's trip in 1827 showed that the account was full of errors in detail. My impression would be that Hubbard was probably correct in saying he received such a tradition
4493 from these men. As to whether the most active trade carried on on the Desplaines river falls between the period of 1783 and 1825, could not base an answer on these sources that have just been read me or called to my attention. Certainly not without further study and consideration. Counsel in asking me questions based on these 30 odd references that he has cited.

4494 My conclusion, transcript pages 4278 and 4279 (Abst., 1615), "As to the conclusion that the most active trade on these two rivers was in the period from 1783 to 1825 I do not care at the present time to dispute this, but I wish
4495 to examine the evidence as to what this most active trade amounted to." What I meant by that statement was this: that I proposed to take up an examination of the evidence that had been admitted as to the character of this trade in this period, and such an examination follows then my statement at that point.

As to the trade carried on on the Desplaines between 1783 and 1825, will have to have further time to study those sources which counsel has cited. Counsel has been several hours stating the question, and several weeks preparing it, and I could not answer it off hand.

4496 As to the present state of mind, I think I have not come to any definite opinion one way or the other, and I made no effort to state such an opinion in my direct testimony. I prepared for this testimony, and examination under pressure. I did not find time to sufficiently prepare myself

for that, and therefore have not a definite opinion upon it.
4497 However, I do know something about it. In that part of the record to which counsel has referred, I took Alvord's statement for what it purported to be worth, and proceeded to examine the evidence he had put into the record bearing upon that particular subject.

4498 Being asked who was the first person to use the Desplaines river, would say, supposing that Joliet and Marquette used the Desplaines river, they would be the first ones that I know of.

Q. That is what I want to get at. What is your opinion as to whether or not they used the Desplaines River?

A. I think Marquette probably used the Desplaines river on second expedition 1675. From my general opinion and
4499 impression, the account of Joliet and Marquette's first journey does not make clear whether they used the Desplaines or not. The whole trip is disposed of in few lines, leaving it open to inference or assumption as to whether they used the Desplaines. On the second trip Marquette came down the western shore of Lake Michigan to some point near southern end of lake, passed some time in a winter camp, and went down the river in early spring, in my opinion. The matter is open to dispute among historians. I believe it a fair inference that in coming up the Illinois river route in 1673, they also made some use of Desplaines. That cannot be stated with absolute certainty by anyone.

4501 The surgeon tried to come up the Desplaines and failed, assuming that Marquette is talking about the Desplaines, which I have stated to be my opinion. Concerning the first expedition of Marquette, I read from the narrative 59, Jesuit Relations, page 161:

"We therefore reascend the Mississippi which gives us much trouble in breasting its Currents. It is true that we leave it at about the 38th degree, to enter another river, which greatly shortens our road, and takes us with but little effort to the lake of the Illinois."

4502 The Illinois means Lake Michigan (reading):

"We have seen nothing like this river that we enter, as regards its fertility or soil, its prairies and woods; its cattle, elk, deer, wildcats, bustards, swans, ducks, parroquets, and even beaver. There are as many small lakes and rivers. That on which we sailed is wide, deep and still, for 65 Leagues. In the spring and during part of the summer there is only one portage of half a league.

(Footnote 41.) We found on it a village of Illinois called Kaskaskia, consisting of 74 cabins. They received us very well, and obliged me to promise that I would return
4503 to instruct them. One of the chiefs of this nation, with his young men, escorted us to the Lake of the Illinois, whence, at last, at the end of September, we reached the bay des puantz, from which we had started at the beginning of June."

4505 I based my statement that Marquette probably used the Desplaines partly on those statements. I stated it is my opinion that they probably made some use of the Desplaines. That cannot be changed into a statement of absolute certainty. It is based in part upon those passages
4506 which were just read into the record, and in part on the study other historians have made of this and other passages. There has been some dispute about this whole matter.

The passage from Marquette's journal, page 181, cited at transcript page 63 (Abst., 27), beginning with "We started yesterday and traveled 3 leagues up the river without
4507 finding any portage," etc., would be one other that I would cite in support of my opinion that Marquette probably used the Desplaines in 1673. Taking all these passages together, the question as to the use of the Desplaines is
4508 in doubt, because Joliet and Marquette had the lightest possible equipment and made light of long portages, as though they were a matter of easy accomplishment. In going down the Wisconsin, Fox or St. Lawrence river or any other, they might make portages without making any mention of the fact. In this account of their passage from the Mississippi to Lake Michigan it seems to me probable they
4509 would speak of the point where they left the Illinois, to change over to another river system. Therefore they may have made a number of portages along the Desplaines, without mentioning them. I think that is a fair matter for doubt.

4510 If Marquette was at modern Chicago, when he wrote this, I think it reasonably evident they used the Desplaines. The question in dispute is as to just where Marquette was when this was written. My opinion is that he was probably at or near modern Chicago, and probably used the Desplaines to some extent.

4512 Q. Doctor, I find this statement in the transcript: "I believe I stated a few moments ago that they did make

use of the Desplaines." I have not been able to find the exact statement to which you referred, but we may assume, may we not, that that is your opinion?

A. I would call counsel's attention to the fact that on page 4499 (Abst., 1689), I stated and I read a portion of the statement. "And my opinion is as I stated a few moments ago, that he went down the Desplaines river." Referring there to the second expedition of Marquette, the one in 1675. And that on page 4500 (Abst., 1689), referring to the first expedition, that of Joliet and Marquette in 1673, I said, "My opinion is that they probably made some use of the Desplaines river, that it is reasonably certain that they came up the general Illinois-Desplaines route," and further, omitting "I think they probably did a part of the way perhaps" referring in that last statement to the fact that they passed in part along the water in the Desplaines river.

It seems to me that I have made it reasonably clear that I think they made some use of the Desplaines river. If counsel wishes that made still plainer, I will now state that it is my opinion that on the first expedition of Joliet and Marquette in 1673, some use was made of the Desplaines river, noting however in this connection, that I, as I have heretofore pointed out, do not pretend to certainty on that point.

4513 Tonty drew a sledge along the Desplaines river. I
4514 believe the year was 1680. Tonty's first passage along
the route between Lake Michigan to the Illinois was
referred to in the passage at transcript page 72 (Abst., 30),
which was read from one Margry, page 589, which begins:

"Seeing that nobody came, we set out with the design of
making short day marches," etc. Concerning that jour-
4515 ney, there is some difference among historians as to
whether he actually passed in a boat up the Desplaines.
I have given it as my opinion that he did use a boat (see
Transcript, page 4264, Abst., 1607.) I am not sure whether
I stated to what extent on the Desplaines river at that
time. The other reference was to the passage of La Salle
and Tonty to the Mississippi in 1682. There is another ac-
count of an attempted passage of the Desplaines by
4516 Tonty, wherein he totally failed. In the case of the
trip made fleeing from the Iroquois in the winter of
1680-1681, details are uncertain as to the use he made of the
river. I gave it as my opinion on page 4264 of the record to
the effect that some use was made of the river at that time.

From the account of Joutel's journey, he left Fort Lewis March 21st; came to Chicago; arrived March 29th, passed up the Illinois river until he met a rapid stream which obliged him to go ashore, and then into the water, and to draw their canoe. I believe historians assume that this rapid stream was the Desplaines, therefore that they made such use 4517 of it as is indicated in this authority; Stiles edition of Joutel, page 197. It is evident, from the date and the description which Joutel gives of the passage, that this was in the time of the spring flood, that they were coming from Fort Lewis to Chicago.

As to St. Cosme and La Sourse, would say they made such use of the Desplaines as my direct examination pointed out, which was to the effect that they portaged something like 15 leagues of the way along the Desplaines. If that be using the Desplaines river, it is my opinion that they made use of the Desplaines river.

4518 Q. At transcript pages 4414 and 4415 (Abst., 1661), you stated Gravier came from Chicago to this point in 1700, assuming that the Chicago was the modern Chicago. He I should presume went down through the central part of the State of Illinois, presumably down the usual or the frequently followed Illinois river route. What is your opinion as to whether or not he used the Desplaines river in that connection?

Objection; nothing in the citation from Gravier that throws light on whether he did or did not use the Desplaines river; no basis for an opinion; incompetent, irrelevant and immaterial.

4519 A. That would have to be based upon inference and deduction from other sources.

Gravier's letter shows the date of his departure from Chicago as September 8th, 1700. The St. Cosme account indicates that the party left Chicago a year or two before, at a slightly later date in the year, found the Desplaines practically dry. That Tonty, the guide, who was probably as familiar with the Desplaines river as any white man living at that time, preferred the certainty of a nine leagues portage in advance of the effort to make the passage of the Desplaines.

The St. Cosme narrative makes it plain that the passage of the Desplaines on that occasion required a portage of from 15 to 17 leagues in length.

4520 Charlevoix letter dated September 17, 1721, ten days later in the year than the date of Gravier's passage from Chicago says they did not attempt the Chicago-Desplaines route because he received the information that at that time of the year there was not enough water for his canoe.

Hubbard's narrative of the first passage of the Desplaines in 1818, about October 1st, somewhat later in the year than Gravier's passage, shows that they had to frequently unload the boats and put them on rollers, and that they carried the goods, and that considerable time was consumed along the Desplaines to the Illinois.

I think I have stated all the direct accounts of Professor Alvord which he put into his testimony of passage
4521 down the Desplaines river. Any inference based on those accounts would, I should say, be to the effect that either Gravier did not go down the Desplaines or if he did, he went along the bank, or if he went in a boat, he found it necessary to make frequent portages, as did Hubbard and St. Cosme.

Since Gravier was going further down the river and apparently did go some distance down the river, I presume it would be reasonable to suppose that he had a boat with him, and that would furnish some clue perhaps as to the sort of passage of the Desplaines that he made. That would not be a certainty, of course, that would be obvious, but the evidence for the conclusion would be evident from my statement that probably it was some such passage as St. Cosme or Hubbard made rather than simply going on foot the whole distance.

Q. And you would infer from the evidence that he did use the Desplaines to some extent?

A. It seems to me that I have just answered that question, Mr. Corneau.

Q. I did not hear you then. Your first answer was that you did not draw any inference, and then you stated the
4522 character of the use he would have made. I want to know whether you inferred that it was such a passage, if you do so infer, of course.

A. I believe the total length of the Desplaines from the point where the short Chicago portage may be said to strike it to its mouth, or its junction with the Kankakee, is something like forty-five miles, and it is evident from St. Cosme's narrative that they portaged practically all that distance. It is evident from the Hubbard narrative that they made frequent portages, and I suppose it is also evident that the boat

was sometimes in water. I now refer to the passage down in the fall of 1818. I should not attempt to say whether Gravier's experience was similar to St. Cosme's, or similar in details to Hubbard's. I think it is entirely too hazy a proposition to venture any further statement about.

Q. If you draw any inference, I am satisfied with that answer.

A. I draw such an inference as appears in the record from the statement or statements I have made at this time.

4523 Q. My question is whether or not you inferred he used the Desplaines at all, to any extent, with his boat in the water?

A. I would have to base by inference on the accounts of Hubbard and St. Cosme and Charlevoix in the main.

Q. I do not want to force you to draw an inference if you did not draw one, doctor.

A. I would be willing to draw an inference that it is quite possible that he made some use of the Desplaines with the boat in the water. I would be willing to draw the inference that there is no certainty whatever as to that. I should judge that St. Cosme might possibly have put his boat in the water at some time. If he gives us the distances correctly the boat was not in the water any considerable portion of the way. Hubbard, I think it is evident enough, had his boat in the water a part of the time, probably a greater portion of the way than St. Cosme, although that is very problematical

4524 whether Hubbard had his boat in the water any considerable distance along the Desplaines. Now, then, from such evidence as that I do not see that any one can make any detailed statement as to how much of a passage of the Desplaines in the water was made by Gravier when he gives us absolutely no details.

Q. No, I do not ask you for that, I only wanted to know whether you, in your own mind, inferred that he used the Desplaines at all.

A. I have shown the possibilities, I think. I would prefer to leave the matter that way to drawing an inference.

As to whether if I had drawn no inference and do not feel justified in drawing an inference, I would so state, I will say I feel justified in stating the probabilities and possibilities and letting the reader draw his own inferences from such a statement.

As to what inference I would draw as a historian, would say. I would not be justified in drawing an inference without ac-

companying such inference with a summary of the evidence at least on which it was based.

4525 Q. You have given us that summary, now I am asking for the inference.

A. He may have used a boat in the water of the Desplaines, he may not have done so. I have shown here, it seems to me, why it seems a reasonable thing why he had a boat with him, if he had a boat he would doubtless use it wherever feasible. If the Desplaines was in such condition that it was feasible to put the boat in the water, no doubt he would prefer doing that to carrying the boat over land.

In connection with Perrault's use of the Desplaines, I call your attention to my answer as to that on Transcript pages 4141-4142 (Abst., 1562-1563), and say that I think it probable Perrault made some use of the Desplaines.

4526 The document we have on which our knowledge of Perrault's expedition or trip was based, was evidently written originally in French, and has been translated into English. Just what Perrault had which stood for the word "barge," which we have in the translation, I am not clear.

Bearing that in mind, and further the lack of clearness
4527 as to just where little Detroit was, I think it entirely possible that Perrault got to Lake Michigan without using the Desplaines. However, I do not think it probable that he did.

Q. I think my question was whether you had any doubt in your mind upon the subject.

A. I believe I have answered it.

Q. I think you can answer that yes or no.

A. I said that I think it probable that he made some use of the Desplaines. If you wish me to say I am certain, I would say I am not certain for the reasons I have undertaken to indicate in part on pages 4140 and 4141. (Abst., 1563.)

Q. Now, will you just state whether or not you have any doubt in your mind?

A. I have given my opinion, that opinion does not amount to a certainty, it seems to me that clearly answers the question.

Q. Have you any doubt in your mind?

Objection; that the question has been answered.

The witness is advised that he is not required to give further answer.

4528 The WITNESS (continuing): I think Heward used the Desplaines in the way pointed out in his narrative.

4529 It is my opinion that Deschamp and Hubbard in 1818 made some use of the Desplaines, assuming that counsel means use by boats in the water. They found it exceedingly difficult to conduct the boats any considerable distance in the water; were frequently compelled to unload them and carry the goods and propel the boats on rollers.

4530 In the manuscript in the Chicago Historical Society Collections, in the handwriting of Gordon S. Hubbard, page 28 (reading):

"It was about a week before our boats were again loaded and ready to descend the Desplaines; the water of which, being low, floated the boats but short distances before it became necessary to lighten them, often taking all the goods out, and passing boats on rollers over the ripples to floating water. We were about two weeks in reaching free navigation at Starved Rock on the Illinois river, where we rested two days. Some of our men were disabled or sick, but all cheerful and full of fun, rejoicing that the dreaded difficulties were overcome and they were soon to be comfortably housed at their several trading posts."

4531 As to whether Deschamp and Hubbard passed up the Desplaines in 1819, Hubbard's account of this expedition points out that it was time of high flood, when the surrounding country was in large part overflowed. My opinion is that they came up the general Desplaines river route, not being certain however, whether they were at any given time over the bed of the Desplaines or some portion of the surrounding prairie. In my opinion they did, however, make the passage from Starved Rock to Chicago generally along the Desplaines river route, probably much of the time in the river. We have no account of the passage down, in Hubbard, by Deschamp in 1819. Deschamp continued in charge of the Illinois brigade of the American Fur Company, which returned from Mackinac to the Illinois river in a passage in 1818, such as was described by Hubbard to have been made in 1819. That is based on inference, however. As to

4532 Deschamp going down the Desplaines in the fall of 1820.

I think it evident that he did go down the Desplaines in the way which Hubbard describes in part, pages 104 and 105 of Hubbard's life, where, among other things, they stated they came to Chicago, remained several days, and further details as to the river being low, and in places dry, and further on page 105, as to carrying goods and effects

from the South Branch to the Desplaines on their backs, and encountering the usual fatigues in descending the Desplaines; that Deschamps did go down the Desplaines in the way Hubbard indicates in part, and in part describes on these pages.

4533 Concerning the return to Mackinac in the spring of 1821, Hamilton's Hubbard, page 116, states that having received orders to join the Fur Brigade at Beson's post, they resumed their journey April 1st from Mackinac and proceeded leisurely, reached Chicago in due season. I infer that they made the sort of a passage up the Desplaines which Hubbard says it was customary for the brigade to make in this period of five or six years, which the book especially deals with.

In 4 Wisconsin Historical Collections, pages 162 and 163 it appears that Child made a trip to St. Louis in 1821, and came back by way of the Illinois to Lake Michigan in a canoe, paddled by two men; that he came across from the Illinois to the Chicago, without making a portage, for he says that being unable to find the portage, as there had been 4534 heavy rains, and the streams were overflowed, when he had gone far enough, he left the Aux Plein, struck out to the northeast, a few miles, and found the current of the Chicago river, there being two feet of water all across the portage. See no reason to doubt that such a trip was made in the spring of 1821.

The only light we have of the down trip by Deschamps and his brigade in 1821 is found on Hubbard 121 account of the annual return trip from Mackinac which states:

"We encountered the usual trials and hardships between Chicago and Starved Rock."

I would understand from that expression such trials and hardships as have been described by Hubbard in more detail in an earlier portion of the book.

4535 I do not, as made clear in my direct examination, place implicit reliance on detailed statements contained in Hamilton's Hubbard. As shown in connection with the account of the Cass trip in 1827, it is oftentimes untrust- 4536 worthy. From Hamilton's Hubbard, page 134, it appears that in the spring of 1822, Hubbard was sent with four boats up the Illinois to Chicago, that he made the trip and returned; no details given but presumably down the river. Then he says: "When we all moved forward on our annual return to Mackinaw." I understand that to mean

that the brigade came up the river in 1822. Hubbard did not return to Chicago in the fall of 1822. Was assigned to post on Iroquois river; so went up the St. Joseph and crossed over to the Kankakee in order to save the remainder of the journey to Chicago and to save the delays and hardships of the route through Mud Lake and the Desplaines. There are no details as to Deschamps, except page 129:

"My destination had been decided by Mr. Deschamps to be the Iroquois country."

4537 Evidently Deschamps was still in control of Hubbard, and presumably of the fur trade in this particular region. I think it may reasonably be inferred that Deschamps returned by the lake to Chicago and went down the Illinois in what for him at that time was the usual way. There are no statements, at least I see none. All that appears as to a trip upon the river in 1824, is at pages 131 and 132 of Hubbard's life, where sometime toward the end of the season of trade in the Illinois country, Hubbard went to Chicago to await Deschamps and the brigade. It was about a month before they came. I infer that they were coming

up from the lower Illinois and to Chicago in the way 4538 that Hubbard has described as "the usual way." There are no dates in here. One has to figure out the year that the account deals with. This description I have just read

I think applied to the Spring of 1823. Hubbard's first 4539 season in the west was in 1818 and 1819. In the fall of

1818 he passed down from Chicago to the lower Illinois; in the spring of 1819 he passed up the Illinois and Desplaines to Chicago, on to Mackinac; the season of 1819 and 1820 was spent on the Kalamazoo river in Michigan; the third season in the west, of 1820-21, was also on the Kalamazoo river in Michigan; the fourth season, 1821-22 was spent in Illinois, and the account of the passage down the Desplaines

in the autumn of 1821 is found on pages 104 and 105

4540 of his life. In 1822 in the spring of this season they left Beson's post, resumed the journey toward Mackinac about April 1st, and proceeding leisurely reached Chicago in due season, where after a week or ten days, they went on to Mackinac, arrived early in June. Details of trip not given. Hubbard spent the season of 1822-23 in Illinois. His third season in that country. He made a passage down the Desplaines river in the fall, and up the Illinois, and on to Chicago in the spring of 1823. It was this season that Hubbard was sent ahead of the brigade with some four

boats to Chicago, and after storing his goods, returned to the brigade, and they all moved forward as he says on their return to Mackinaw.

4541 All these answers are based on Hubbard's life. Hubbard spent the season of 1823-24 at the post of the Iroquois, which was his fourth season in Illinois. On the trip to the Illinois country this year from Mackinaw, he omits to come by Chicago, and goes up the St. Joseph
4542 Kankakee route to his post for the reason which I believe has been stated in the record already. In the spring came to Chicago and awaited Deschamp, after whose arrival they journeyed on together to Mackinac. In the season of 1824-25, Hubbard was placed in command of the Illinois brigade in place of Deschamp, gives up the portage route in passage down the Desplaines because of its difficulties, and adopted the plan of sinking the boats and carrying on trade with horses, which he had long urged upon Deschamp. This statement that I have just made is intended as a correction of my former statements as to the dates of these various trips in so far as they need correction.

4543 These trips made by Deschamps, or which I infer were made by Deschamps when Hubbard was not along would be the trips down in the fall of 1819 and up in the spring of 1820, down in 1820 and up in 1821 and down in the fall of 1823 and up in the spring of 1824, subject to my statements as to the evidence on which they are based.

4544 As to whether the officer referred to by Keating who came up the Desplaines river was Hopson, and considering in that connection Keating's transcript, pages 295-297 (Abst., 135-136), I suppose Keating was told by Hopson that he came up the river. I see no reason to question that. I have no means of knowing except from Keating how reliable a witness Hopson was; think it does not appear from Keating whether the man who came up the river was Hopson or not. Do not think that can certainly be settled from Keating. In the absence of contrary evidence, it would be reasonable to accept Keating's statement that Hopson came up the river.

4545 The particular point Keating has in mind is when he speaks of Hopson as not coming up the river, but coming across between the two rivers from the Desplaines to the Chicago. If Hopson could come across that portion of the route in a boat, think it reasonable inference he could come up the river at the same time. As to how he came up the river one must

review such accounts as we have of the nature of the
4546 passage, when it was high flood, as was evidently so
then. For example, Joutel says he had to pull a boat in
the water. Hubbard shows they could make but six to ten
miles a day with the hardest toil, and Marquette says that
the surgeon could not make the passage at all, or tried it and
gave it up. The particular circumstances under which Hop-
son made the passage, would have to be supposed from state-
ments we can find that throw light upon that point. I see
no reason to question Keating's statement that he did come
up. Having made no study of the matter I have no opinion
of whether or not the Illinois Commissioners went down the
Desplaines in 1823.

4547 My attention is directed to report of the Canal Com-
missioners of the State of Illinois, General Assembly,
on January 3, 1825, page 4, Gentlemen of this committee were
appointed to receive and adopt measures to effect a com-
munication by canal between the Illinois river and Lake
Michigan. Made a survey of the region and it appears took
canoes at Chicago and proceeded to go up the Chicago river,
and then to make a portage, and then to descend the Des-
plaines 50 or 60 miles to its mouth. It states there is a
portage of seven miles to the Desplaines, which evidently
applies to some particular time, and not all seasons.

4548 The statement would not be correct without further
explanation. Except as to what I have learned from
other sources of the nature of the Desplaines and the usual
passage of it, I would have no reason to doubt that they
went down the Desplaines. My knowledge of it is confined
to this hasty examination which I have just made.

Whereupon counsel for defendant read into the record
from page five of the foregoing document the following:

"It is a source of much satisfaction for the Commis-
sioners to be enabled to state, that the result of this
examination eventuated in the conviction, that from
the mouth of the Illinois river, to the Little Vermillion,
a handsome stream 12 or 15 feet wide, discharging its
waters into the Illinois river on the west side, and about
4 miles below the rapids of the Illinois, there is not the
least obstruction to the navigation, excepting in two or
three places below Spoon river, in extremely low stages
of water, where small sandbars shew themselves, but
4549 which, however, can be easily removed.

"Perhaps no River on the continent surpasses the

Illinois, in the facility and safety of its navigation, the current being very gentle, and there being but few Islands in the River.

From the mouth of the Little Vermillion, above referred to, neither the Illinois nor the Desplaines is navigable in low stages of water, as they are frequently interrupted by rapids; but no serious obstacles present themselves, in effecting a Canal navigation from the head of the navigable waters of the Illinois River to Lake Michigan; the valley of the Rivers Illinois and Desplaines, being an inclined plane, and the country between the Desplaines and the Chicago River, smooth, flat prairie, with a gentle inclination towards the lake."

The WITNESS (continuing): Subject to the qualification to the validity of the detailed statement in Hubbard's life, it seems evident that in the early spring of 1825, when
4550 the rivers and streams had all overflowed their banks, Kinzie sent two men in a canoe from Chicago down to Peoria; that Hubbard about the same time in another canoe with one companion went on the same trip. They went to St. Louis, got some goods, delivered them at Chicago. In the absence of further details, basing my inference on general knowledge, I suppose they came back up the Illinois and Desplaines river as was usual at that time of the year when
such passages were made.

4551 The source of an opinion as to a trip by Fonda up the Desplaines must be based on a series of newspaper articles, containing the reminiscences of him, written when an old man. An informant of L. C. Draper says they are as radical as anything of the kind given from memory (from the editorial note preceding Fonda's Reminiscences).

4552 In these reminiscences, I have no doubt there is much truth and error. As to the outlines of the work, they may be taken with considerable confidence as being correct in spirit. Details must be taken subject to criticism and verification. It is my opinion he did not make this trip in 1825 but probably two years later. Though I see no particular reason for doubting that such a trip was made in a canoe up the Illinois and probably by way of the Desplaines to Chicago. Such a conclusion must rest upon inference. I
read from 5 Wisconsin Historical Collections, page 216:
4553 "At length the councils were concluded, and our guide signified his willingness to proceed. Under his

direction we paddled along until we came to the Desplaines River, from which we passed into a large slough or lake, that must have led us into a branch of the Chicago River, for we followed a stream that brought us opposite Fort Dearborn."

Further than just read there is no detail of the passage of the Desplaines. My opinion would be that some such trip was probably made, and the Desplaines probably used, and if it was not in the spring, which I think it was, it was at a time when the water was higher than ordinary, both on the Illinois and Desplaines.

4555 I have used Blanchard's History. Historians need to be on their guard in my opinion in using it. Have not made a critical study of Blanchard for this case, except in a general way. Blanchard lived here in Chicago, about a generation ago and undertook to write a history of Chicago and to some extent the Northwest generally.

4556 Blanchard's History, Chicago, Blanchard & Co. 1898, page 503 (reading):

"This young Miss is now, 1880, Mrs. Archibald Clybourn, residing on Elston avenue, Chicago; and to her is the writer indebted for the preceding facts relating to her father. In the spring following their residence at Lee's Place 1827, her father, Mr. Galloway, moved with his family to the home he had purchased the year before. His transportation to the place was effected by means of a large boat fashioned on the dug-out plan, which he made himself from a black walnut tree, on the banks of the Chicago river. Taking advantage of the usual spring freshets, he navigated this vessel, freighted with his family and all his valuables, through Mud Lake
4557 and down the Desplaines and Illinois rivers, to his home. The place was then called the Grand Rapids of the Illinois. Here Mr. and Mrs. Galloway spent the remainder of their days, highly esteemed by all who knew them. Mrs. Galloway died in 1830, and Mr. Galloway survived till 1864, when he died, and many of the present inhabitants of Chicago will doubtless remember reading the becoming obituary notices which the Chicago papers gave to him at the time."

As to whether this trip was made I hate to express an opinion without investigating the matter. There is no indication

as to the age of this young Miss at the time the trip was
4558 made. I do not care to accept any of Blanchard's state-
ments with confirming them. If I could not confirm
them would take it as suggestive. Blanchard as has been
pointed out, had a trustful and childlike disposition in his-
torical matters, and was inclined to consider if he had any
authority whatever for a statement that therefore it was es-
tablished and valid. Would accept his statements as sugges-
4559 tive, unless could corroborate them or they appealed to me
as self-evidently true. Would seek to find with ref-
erence to the supposed trip of the Galloway family. If
there was no river there, unless it was in time of ex-
treme spring flood, I would suppose the trip could hardly be
made in a dug-out. It says it was made in the spring of 1827
at the time of the spring freshet. I judge from some of the
accounts we have had that are in the record, it will be pos-
sible to send a dug-out down the Desplaines in times of
spring floods.

4560 I think any historian who is worthy of the name,
would seek to investigate that matter further before he
came to any final conclusion upon it. I would hold it as sug-
gestive, and if no inherent impossibilities existed in the
statement, would not be inclined to reject the story. I might
even suppose the statement were probably true.

4561 I have no reason to doubt that Cass made a trip up
the Desplaines in 1827. The account of Furman's sup-
posed trip in 1829 is said by the author of *Chicago An-*
tiquities to be taken from an old *Maryland Periodical*, as a
letter purporting to have been written from Fort Dearborn
June, 1830. It states that in April, 1829, Furman with a
party of men in a canoe went up the left branch of the Chi-
cago to its source, thence in a heavy snowstorm passed
through Lake Marais into the Riviere Aux Pleins. It states
that the prairie between those streams is swampy, and dur-
ing spring floods a considerable lake is formed; that there
is water connection between the two; the principal point
4562 of the letter dealing with the wonderful shooting, pur-
porting to be testified to by Furman's associates. I
would take it as strongly suggestive that the trip had been
made. See no particular reason to doubt it. Have made no
independent investigation as to whether that trip was made.
Whereupon counsel for complainant directed the attention

of the witness to a statement by Flagg, transcript page 375 (Abst., 175) (reading):

"The Illinois, which is about 400 miles in length and heads near Lake Michigan. A branch of the Illinois heads within 4 miles of the head of the Chicago, a short river which empties into Lake Michigan. In freshets boats pass this portage, the waters being connected. They are made shallow for the purpose. I have seen them at St. Louis landing."

4563 This statement was taken from the Alton Weekly Telegraph, 1876, a contribution entitled "Madison County in 1818."

Counsel states that these clippings were obtained from the grandson of the Flagg who wrote the letters, 4564 and that they have been returned to him, and that they have never been published in a historical work.

4565 The WITNESS (continuing): I should not attach particular importance to such a letter, basing my knowledge on a perusal of the record for the reason that such information as we have here is very liable to be inaccurate and incorrect, and requires careful scrutiny.

4566 Statements by pioneers of early history of Chicago under similar circumstances have been found to be inaccurate. For instance Gale, who lived here since 1835, wrote a book, purporting to give his reminiscences. Ferdinand Jones and Furgus have completely riddled his statements, and I may say, if I were allowed the opportunity, I could riddle those of the latter gentleman.

4567 On the assumption that the statement of the editor is correct that these letters were copies of letters which were written by Mr. Flagg September 12th, 1818, and between 60 and 60 years before the editorial, I would say the analogy is not a close one, but I point out that Mr. Flagg knew or what he had means of knowing about the Chicago portage does not appear from the testimony of complainant's witnesses. Flagg may have detailed common hearsay or

4568 current talk, which I have shown on my direct was largely founded on hearsay. I doubt very much whether the boats were made shallow for the purpose of passing the Chicago portage. Have no way of knowing what Flagg knew about the matter. While I have positive evidence that there was a general and mistaken impression as to the nature 4569 of the Chicago portage, and a frequency of its passage by boats in this period, I think it was probably feasible

to pass from Lake Michigan to the Desplaines without portage, in time of sufficient freshet with the right kind of a boat. There are sources that indicate that fact. I suppose if I told counsel I was in the habit of jumping a six foot fence, counsel, probably knowing that that has been done by athletes, might possibly open his mind to the proposition that I could do it, but might not and probably would not positively in his mind think I had done it.

4572 You are offering me a newspaper account of what purports to be the letter of a man who may have known a good deal or who may have known nothing about the things he was writing about. You are asking me to give my approval of that letter, and I have stated my position with reference to it. I have no reason to doubt that at times in freshets boats might pass through—from the Chicago to the Desplaines. I have no particular reason to affirm that Flagg, who is supposed to have written this particular letter, had any knowledge of his own on the subject. I think the whole ac-
4573 count is properly to be held in suspicion. What I know about Flagg appears here in the record.

Whereupon counsel for complainant directed the attention of the witness to "Recollections of the last ten years, passed in occasional residence and journeyings in the Valley of the Mississippi," etc., in a series of letters to Rev. James Flint, of Salem, Massachusetts, by Timothy Flint, 1826, at page 102, which the witness read as follows:

"Boats ascend the Arkansas and Red rivers, nearly two thousand miles. Boats come with very short portages from Montreal to the upper Mississippi, and I have seen a Mackinaw skiff carrying five tons, which came from the lakes into the Chicago of Michigan, and from that over a morass from one end of which run the waters of the Chicago, and from the others those of the Illinois, into the Mississippi, without any portage at all. The waters of the morass were found sufficiently deep
4574 for her to make her way from the river of the lake, to that of the Mississippi."

From Flint's statement that he arrived at St. Louis on the 24th of May, I should say that if he did arrive there, he
4575 may well have seen those boats were at that town.

Would have no reason to doubt that Flint saw a boat, which he thought had made such a portage. It does not appear that he saw it make the portage. As to whether or not

I would accept the statement of one who had not seen the boat go over the portage, that would depend entirely
4576 on the circumstances of a given case. It would seem a reasonable conclusion that Flint was told this boat made such a trip. It is not evident, as counsel seems to think, that he talked with the men on the boat. He may have gotten reports from others. The element of doubt in my mind so far as I question this statement, pertains to the common impression as to the nature of that passage and the frequency of its use, which was erroneous and unfounded. Flint might have been informed by one speaking under the influence of this erroneous impression. See no particular reason to question that such a trip was possible by a Mackinaw boat in time of spring flood. Do not deny that such a trip was made or that the boat that Flint saw had actually made the passage.

4577 If I would look up sources to determine whether or not the Desplaines had been used, and I found that statement in that work, would consider that statement pretty good evidence that the Desplaines had been used; and I do not understand that the thing stated would be impossible.

I do not say that the historian accepts no source as reliable which is based on hearsay; some may be good, others may not. I prefer to examine every source, if possible. As to whether I would consider that kind of a statement one which would be good, would say that would depend on the information which Flint had received.

4578 I have pointed out that we have no means of knowing from whom he got this information. Counsel suggests that he talked to the boatmen. I do not see that this is a necessary conclusion. This thing was in the air at the time; it was retailed in many books and it was doubtless repeated many times by persons in conversation; repeated orally I meant to say. I consider this pretty fair evidence; perhaps not absolutely conclusive evidence.

4579 If I found that in the only statement on the subject, and I were writing a history serious enough to warrant it, I would probably make the statement and cite my evidence for it, leaving the reader in a position to judge for himself whether the statement was baseless or not. There are all sorts of histories. Some written for newspaper articles; others text books, or to entertain. I assume I am writing a serious history.

4580 Based on this one source as it appears here, I would not make a statement as to the passage from the lake to the river without portage without any qualification or reservation or expression of uncertainty. Taking into account what I know of Flint, his opportunities, travels, physical condition of the river and its use by others, I have no reason to doubt that such a trip may have been made. It is another matter to affirm that it was made.

4581 The journal of Marquette's first voyage shows their return trip July 17th, reached Green Bay the end of September. Between the middle of July and the last of September, he evidently passed up the Illinois. I understand the total length of the trip was about three thousand miles; 4582 that the return trip was shorter than the outward journey. Roughly, the return journey must have been about 1,200 miles long. Chicago, generally speaking, is about 4583 300 miles from Green Bay. Therefore, having gone over probably more than half of their journey, more than half of their time had been consumed when they reached the Desplaines river and Chicago. That is from July 17th, until the end of September, approximately two and one-half months. From this hasty calculation, I presume it may have been around September 1st.

On transcript page 4267 (Abst., 1609), I located the time Marquette went down the Desplaines, approximately the last of March and first of April at the time of spring floods.

4584 The marginal notation for the meeting of the surgeon is the 6th of April. In my conclusions, transcript 4268 (Abst., 1610), I placed the time of Tonty's trip as November or December. I may want to check that up further. I supposed that was accurate when I gave it.

4586 Joutel was in March, according to transcript 4263 (Abst., 1607); St. Cosme between November 2nd and 4587 11th, transcript 4267 (Abst., 1609); Perrault left Cahokia on May 4th, to come up the river, which would put him about the early part of May. Heward's time has been located transcript 4267 as May 12th to 15th. I say the date of Hubbard is evidently about October 1st, transcript 4588 4270 (Abst., 1611). There is nothing to fix the exact date of Hubbard's first trip down further than as to the time he got to Chicago and the approximate length of time he stayed there. That is without pretending to be accurate as to detail.

4589 As to the trip up, Hubbard's life, page 59, states that on the forenoon of March 20th they heard the portage brigade, and the next day loaded their boats, and the day followed started on the journey up the river, arrived at Chicago about April 1st. Hubbard was in doubt about these dates in his old age. He appears to have changed them from time to time.

Think it would be impossible for one to locate date of Child's trip on the evidence I have seen, aside from weather conditions. Those are the only things I have to base an answer on. I infer it was either in the spring or time of flood.

4590 Keating reached Fort Dearborn on June 5; was there a few days before he learned of the trip by the officer, which trip would then be a few days before June 5th.

Fonda transcript 4265 (Abst., 1608), was not located any closer than can be done by the condition of the weather. There is no statement further indicating.

4591 The different men who recounted their own experiences in actually using the Desplaines (I do not pretend that this answer is complete—I give as many instances as occur to me at this moment) were Tonty in November to December, 1680; La Salle, so far as he may have come up the Desplaines, from 1680 to 1681; that of Child in 1831; the surgeon, who Marquette reports, in 1675.

4592 Joutel's trip. These were passages up that I have referred to. Now, down the river, that of Membre-La Salle party, January, 1682; St. Cosme, 1698; Hubbard and party the fall of 1818; similar passages made by Hubbard or others, which he discusses in succeeding years; men from Montreal of whom Joutel tell us, who were unable to make the trip any further than Chicago. I add to the list of those passages made up the river, the various passages which Hubbard or others whom Hubbard describes made, wherein it appears that difficulties of any sort were encountered.

4593 Referring only to those who describe their own experience, those up the river route, were Tonty, La Salle, Child, Joutel, Hubbard, Down, Membre and St. Cosme.

4594 Speaking from memory, the difficulties described by Tonty, were lack of food, poor canoe and danger from hostile Indians.

In 1680 and 1681 La Salle was traveling on foot through deep snow in that particular expedition.

4595 Child's difficulties arose chiefly from the fact that there was such a flood that he was uncertain as to his way; difficulty in finding portage, which did not exist at the time in the usual sense.

Joutel's difficulties also arose from too great an abundance of water; flood conditions on river, had to pull canoe in water.

In a general way Hubbard's up-trips were similar to those of Joutel.

On the down-trips Membre went on the ice and through the snow in the winter of 1682.

4596 St. Cosme's difficulties arose from an absence of water to float his boat in; by one account he computed the portage at 15 leagues and by another 17 leagues. This trip was in the first half of November.

The down-trips of Hubbard were difficult because of the absence of water. The first was in October, the others approximately that time.

4597 Q. So that of the accounts of those who actually used the Desplaines river, the only recorded difficulties which we find growing out of low water arose in October and November?

A. In the restricted way in which the question was put by counsel, I believe that is correct, so far as those men we have under consideration are concerned.

Q. And we also find that the river was in fact used by various other people whom we have been able to locate as using it in March, Marquette, Joutell and Hubbard; in April Marquette and the surgeon; in May, Perrault, Heward and probably Hopson, who we concluded came up there in May or June; in July, Cass; in September, Joliet and Marquette; October, Hubbard; November, St. Cosme and La Crosse; and November or December, Tonty.

4598 A. It seems to me counsel is using his term "the river was used," in entirely different sense in these different questions. If I answer the question as asked, it will be made to appear that I am using the term in a single sense. We have, as appears in the record, accounts of the use of the river route, and at times of the river, by such men and during such months as counsel has indicated. I think, however, these answers put me in a misleading position.

4600 Q. Doctor, did you have in mind any other authorities than those to which you have already referred, bearing upon the conditions of the Desplaines river? If so, I

wish you would give me first the names of those authorities.

A. I do not see how I could answer that question, because there are, I suppose it would not be exaggerating to say, scores of authorities and works that refer to the Desplaines river, and that I could bring to mind if I could take time to reflect. Some of them I have used and some I have not.

4602 Q. I want anything which you have in mind on which you would rely as a historian, or have relied in the various statements you have made concerning the difficulties in using the Desplaines.

A. First, La Salle. The reference is Margry, Volume 2, at page 79 and 168 to 174. Joutel. Hubbard's account of the first trip up the Desplaines. Hubbard, including
4603 whatever appears as to his further trips up the river. St. Cosme. Marquette's account of the surgeon. Heward. Hubbard's account of the down trip in 1818. References to similar down trips and reason for avoiding them in future when he found it possible to avoid them. Schoolcraft, 1821. Charlevoix, 1721. Tonty, 1682. Margry, Volume 1, p. 602. Kennedy, 1773. Alvord's summary of accounts of passages of the Desplaines, contains those of Membre and La Salle in 1682, which obviously have nothing to do with navigation of the Desplaines. Therefore I leave them out of this list.

I am offering the list I had in mind at the time counsel put the question which I regarded as unfair. (Trans., 4598; Abst., 1709.)

4604 I am not certain at this time that this list is complete. The accepted opinion is that La Salle first saw the Desplaines about December, 1680, or January, 1681, perhaps its mouth in 1679. He may have seen the Desplaines, aside from the mouth, earlier, since he passed down the western side of Lake Michigan to St. Joseph in 1679. He passed
4605 down the Kankakee river in 1679, and would naturally see the mouth of the Desplaines. On the trip down the west shore of Lake Michigan he may have made an excursion to a point where he might have seen the Desplaines. I am only stating possibilities; I have no positive evidence.

4606 In the course of the canoe voyage around the lake, La Salle probably came by Chicago, and being an explorer and on such a mission and with such an errand as he had in mind, it seems to me entirely possible that when he

came to the Chicago river he may have taken a sufficient-
4607 ly long excursion to have viewed the Desplaines. Do not
state that he did that, nor can I read any positive state-
ment in any book to that effect. Both references I gave to
counsel were not to this particular trip. I based that state-
ment on the understanding of the accounts we had of the
4608 trip. I might call attention to Wisnor, who is generally
regarded as good authority on that. Speaking from
memory, I know you will find there is no doubt whatever
4609 on that point. La Salle went around Lake Michigan to
the mouth of the St. Joseph river, stopped there for
some time, and thence to the Kankakee and Illinois. And in
doing that I suppose he would pass the mouth of the Des-
plaines river. And unless he made some excursion from Chi-
cago I suppose he would not have seen the Desplaines at any
other point except where he passed it at its mouth.

Q. Do you find any affirmative evidence in any account of
that trip, that La Salle did stop along the shores of Lake
Michigan at any point and make excursions?

A. In Winsor's *Cartier to Frontenac*, pages 263 and 264 is
Winsor's account, which is a secondary one, of this portion
of this particular trip of La Salle's. It appears that the
4610 Griffon set sail from Green Bay September 18th, 1679;

La Salle shortly started on his trip down the western
side of the lake from Green Bay with four canoes and four-
teen men. Canoes were laden, gales encountered, food gave
out and they secured supplies, of Indians along the way; also
a number of their party engaged in hunting along the way
to keep them in food. They found wild grapes and feared
their camp would be robbed by savages, and so forth.

November 1st, 1679, they reached the mouth of the St.
Joseph. From that account it would appear that it is not an
unreasonable inference, and I may say not as unreasonable
as some counsel have desired me to draw, that La Salle might
have seen the Desplaines. I have not said that I have posi-
tive evidence and I have not said that I can read any posi-
tive evidence from a book showing that he did see the Des-
plaines in the course of his passage down the western side of
the lake.

4611 Winsor seldom states authorities. He has been criti-
cised for this, but his books as a whole are regarded as
highly as anything American historians have produced. Tur-
ner, whom complainant's witnesses have given a high repu-

tation, and rightly too, himself gives high approval to Winsor's books.

4612 Parkman's account of this expedition gives further details, that La Salle having trouble with certain of the Indians, went forth, pistol in hand, met a young Outagami, seized him, and led him back to camp. This done, he again set out, and soon found an Outagami Chief,—the wigwams were not far distant.

Without investigating what particular part of the trip this was, the Outagami Indians were located in the region immediately around Chicago, at the western side of the lake toward the southern end. Perhaps they were located further to the north; they were to the north rather than the south of Chicago. As to whether they were located near Green Bay in Wisconsin, I should have to look that up before giving a final answer. (Reading, p. 150):

"The official account of this journey is given at length in the *Relation des Decouvertes et des Voyages du Sieur de la Salle, 1679-80-81.*"

4613 I presume that will be found in Margry. In Vol. 1 Margry, p. 435, is an account which I suppose would contain the account of this journey. On page 451, it appears they started out from Green Bay on September 19th, passed along in a southerly direction and suddenly a storm arose. The next paragraph is dated the 25th. Evidently almost a week was consumed in the passage described in this one
4614 short paragraph. It would have been possible to have made excursions at that point in their route. If they had it would not be the Desplaines river. It simply appears that they gained the land and tarried there six days. He does not tell us whether they spent the six days in excursion expeditions or on the one point where they gained the land. I suppose he was about Green Bay. On the 25th they journeyed all day; the wind rose and they landed on a rock. Here they stayed two days. I am giving the substance of the translation.

4615 Under entry of the 28th they were forced to land on a rock, where they stayed two days and ate up the rest of their food. I think they had not come to the site of Chicago at this time.

They departed October 1st and traveled some distance, almost to the Pottawattomies village.

4616 Mr. Winsor locates the village of the Maskoutens and Outagamies at the River Milwaukee.

Objection to cross-examination as to matters which were not the subject of examination on direct.

4617 The WITNESS (continuing). Without having read on to the end of the relation in the original French, I understand this reference to the Pottawattomies is before the account of the meeting with the Outagamies, judging from Parkman's paraphrasing of the account.

4618 My statements as to these explorations or stops were not based on the reading of this article. Therefore it seems to me it has nothing to do with the statement. I am able to read French, and will translate it if counsel desires. Or I can give it by reading from Parkman's or giving a summary of his account or of Winsor's account.

4619 I would not undertake to state all the stoppages mentioned in this narrative of that journey without consulting the authority. To state where they stopped I would have to go over the narrative, taking the accounts of stoppages, length of time they stopped and estimating distances.

4620 I have referred to Margry when I was interested in looking up some particular point. I have not read over the original journal; I have read portions of it as I have indicated.

4621 Waiving the dispute as to whether La Salle came up the river several years before this, I would say that I am not aware of any affirmative evidence that La Salle ever saw the Desplaines prior to the time he passed its mouth going down the Kankakee.

As to when I find the next account of his seeing the Desplaines or going up or down it, will say I believe the next direct account had to do with La Salle's return from Canada to the Illinois country in the fall and winter of 1680, when he found the Illinois village destroyed, and returned to the fort on the St. Joseph.

4622 On the direct examination it was established that he came to the forks of the Kankakee and Desplaines and some distance up the Desplaines, it being problematical, how far. He finally came out at St. Joseph. Complainant's witness sought to show he passed along the Desplaines at that time; my own opinion being it is not capable of being shown how far he passed along the Desplaines. In the spring of 1681

he went from St. Joseph to the Illinois. It does not appear whether he saw the Desplaines or not at that time. It does not show he went down the Kankakee. It simply shows he went from the fort on the St. Joseph to the Illinois. I base my statement on Winsor's account.

The next occasion he saw the Desplaines was in the winter of 1681 and '82. Counsel asked for positive and direct accounts of seeing the Desplaines, which does not take into consideration that La Salle was in the country much of the time and may have seen the Desplaines or other portions of the country, without giving any account of it.

4623 The first time La Salle came through the country, he arrived at St. Joseph November 1st; resumed journey December 3d; went up river to the portage; thence down Kankakee to Fort Creve Coeur, although he did not spend winter at that fort.

4624 La Salle started on his trip to Canada in March, 1680, so evidently passed a considerable part of winter in the western country. (See Winsor, *Carties to Frontenac*, p. 270.)

Parkman's *La Salle*, page 167, Chapter 13, dealing with the winter La Salle spent in Illinois, says, that in the middle of January La Salle and Hennepin went in a canoe from Fort Creve Coeur to what we now call Starved Rock, which he noted on his way down as being a suitable site for a fort. He went back to Creve Coeur; spent some weeks there. Started in March to return to Canada; came in a canoe to a point some miles below Joliet, and on account of river being closed despaired of going further by water, hid their canoe and started across the country for Lake Michigan. La

4625 Salle went on to Canada; started to return to Illinois in August; came to Mackinac; thence down the east side of Lake Michigan to the fort on the St. Joseph. Found it abandoned, and went on with a part of his men to Illinois, in the early winter of 1680-1681. He reached St. Joseph in 1680, in November; was floating down the eastern side of lake during October, according to Winsor.

4626 2 Margry. Sec. IV, *Voyages of La Salle*, from Lake Ontario to the Illinois, and so forth, page 79, does not describe any trip, but gives an account of conditions in the Illinois country, etc. This particular account is dated 1679 to September, 1680, and is called a letter of discovery to one of his associates (he gives an account of conditions met with

in the course of this account of the nature of the water routes.) I read from the translation (reading):

4627 "Furthermore, even if contrary to what has been said to us and to all which I can conjecture about the river, it should not be navigable as far as the sea, this second bark which I have had begun in this country of the Illinois would always be very necessary to bring back by a river which I have found the products of the country of the Illinois to Fort Frontenac, this river being there much more convenient than the way by which Joliet had passed, of which he had dissimulated the difficulties for reasons which I have not been able to guess."

He then describes the route by this river to which he refers on the map and takes up the consideration of the route by the lakes and its difficulties. (Reading page 81):

"The route by the lakes has some very great difficulties which Joliet has ignored in part and in part dissimulated. There are many more establishments needed there. There is one needed at the base of the falls by which Lake Erie empties into Lake Ontario, where navigation of barges is interrupted for thirteen leagues, and another where it begins again to serve below and at the edge of Lake Ontario to receive what comes from Fort Frontenac, while waiting until they transport it to another establishment, where navigation begins at the entrance to Lake Erie, in order there
4628 to reload it into barges. Again there is a very great difficulty which is that near the opening of this lake there is no harbor or roads where one could put a barge in shelter from the furious blasts of wind which prevail there, and because, if they descend into the river, one encounters first a rapids which a barge would not be able to run under sail, unless by tracking out of it and having men, and always with a wind behind and sails set.

2nd. One of them is also needed at the lower part of the Lake of the Illinois, where navigation ends, at a place named Chicagou, to lock up there the things they have brought in the barges and have them transported by canoes two leagues from there, the said canoes can only navigate as far as the village of the Illinois for a space of forty leagues, contrary to what Joliet had said,

that there was only a quarter of a league of interruption of navigation.

3d. One of them is also needed among the Illinois, where barges can navigate.

Besides the multiplicity of establishments which augment greatly the expense and difficulty the lack of exactitude in accounts, the expenses of so many boats are great."

4629 La Salle comes back to this same subject and gives same subject and gives a more detailed account of the nature of the water connection between Lake Michigan and the Illinois by way of the Chicago and Desplaines. The document is headed Roman numerals 2, "Descent of the Mississippi to the mouth of that river," and begins Margry 164, "La Salle arrives at the Illinois, or among the Illinois. Description of the country to the junction of the Missouri with that river which the discoverer has named the Colbert." The date of the document was evidently after January, 1682, for he refers to events that have taken place at that time (reading):

4630 "Having made my caches, I started on the 28th of December, and I went on foot where was Sieur de Tonty, the 6th of January, snows having stopped me some days at the portage of Checagou."

The date there was December 28th, I think in 1681 (reading, page 165):

"This is an isthmus of land which is at 41 degrees, fifty minutes, elevation from the pole, at the west of the Lake of the Illinois, where one arrives by a channel formed by the meeting of many rivulets or gulleys of the prairie. It is navigable about two leagues as far as the edge of this prairie at a quarter of a league toward the west. There is a little lake which is divided in two by a beaver dam, about a league and a half long, 4631 from which issues a rivulet which after winding about half a league across the reeds goes to fall into the river of Checagou, and from there into that of the Illinois. This lake being filled either with great rains in summer or by the inundations of spring, discharges itself also into this channel which leads into the Lake of the Illinois, whose surface is seven feet lower than the prairie in which this lake is."

This is, as I understand, the modern Desplaines.

(Reading):

"The River of Checagou does the same in the spring when its channel is full; it discharges by this little lake a part of its water into that of the Illinois, and at that time should any one make in the summer a little canal of a quarter of a league, says Joliet, from this lake as far as the basin which leads to that of the Illinois, barges could enter into Checagou and descend as far as the sea."

4632 Heath's French Dictionary, in common use by high school students and undergraduate college students, defines "barque" as follows: "Bark, boat, craft, barge."

My study of the record made it evident to me that the translation I am using could be relied upon. Therefore I use it rather than translating the original myself (reading):

4633 "That might perhaps happen in the spring time, but not in the summer, because there is no water at all in the river as far as Fort St. Louis, where the navigation of the Illinois begins at this season, and continues

4634 as far as the sea. It is true, there is another difficulty with this ditch which one might make could not remedy which is that the Lake of the Illinois always forms a bar of sand at the entrance of the channel which leads to it, which I doubt very much, whatever they say, could be cleared or dissipated by the force of the current of Checagou, when one should make it empty there, since much greater ones in the same lake cannot do it. Moreover, the utility of it would be inconsiderable because I doubt, when all should succeed, if a vessel could overcome the great inundation which the current cause in Checagou, in the spring much more rough than those of the Rhone? Again, it would be for a short time and at most for fifteen or twenty days a year, after which there is no more water. What confirms me again in the thought that Checagou would not clear out the mouth of the canal is that the lake being filled with blocks of ice these stop up the most navigable mouths at that time, and, when these blocks of ice are melted there is no more water in Checagou to prevent the stopping up of this canal with sand. But then I would not have made mention of this communication if Joliet had not proposed it, without having sufficiently taken account of the difficulties."

I point out that the references to the Chicago river, in all cases where the term is used in this particular passage just read, I understand, are to the modern Desplaines river.

4635 La Salle being at the St. Joseph river in November, 1680, was eager to reach his destination. I assume he did not stay there any particular length of time. It is clear he was hurrying to get to the fort on the Illinois. They went to the mouth of the Illinois. He traveled back from that
4636 point up the Illinois to where he had left his men at the abandoned or destroyed Indian village on the Illinois. Did not stay any length of time; was in search of Tonty. Picking up his men he went up to the mouth of the Desplaines, and some distance up the Desplaines, then overland to the fort on the St. Joseph. When he went up from the place where he met his other men it was about December, 1680. I read from Winsor, page 272 (reading):

"It was now the early days of December, 1680. He rejoined the men whom he had left near the Illinois town."

4637 He spent the winter at the fort on the St. Joseph, and in March went back to Illinois. Winsor, page 288:

"La Salle reached the fort on the St. Joseph in January, 1681. He stayed there until March, 1681, when he started back, and then he returned to the St. Joseph.
4638 It appears that he met a band of Indians on this trip from the fort on the St. Joseph to the Illinois, and the news they gave him led him to make this return and to go on to the Mackinac where he found Tonty in June, 1681."

(Reading Winsor, 289):

"In March he started on toward the Illinois, full of this hope. On the way, he met a band of the Foxes, and from them learned that Hennepin had passed through their country from the Sioux region, and that Tonty was among the Pottawattamies. These tidings hurried him on. He laid his plans before the Illinois, and then, coming back to the Miamis," —

I judge he went to the Illinois country apparently, and then went back to the fort on the St. Joseph and to Mackinac. He came to the country again in the autumn or winter of this same year and started on his trip down the Mississippi.

4639 He had gone to Mackinac in June; from there to his establishment in Canada, and in August returned

to the west and was at Fort Miami on the St. Joseph on November 3d with a considerable party of French and Indians, which he divided into two bands. Tonty and Membre, with one, went by way of the Chicago route to the Illinois; La Salle and the other one by way of the Kankakee route. This was winter, December to January. They reached the Mississippi February 6th and the mouth of the Mississippi in April. He arrived at St. Ignace by September, 1682. Was ill on his return up the river; did not progress continuously, and I think he stopped at the fort on the St. Joseph.

4640 In connection with the list of sources I refer to on transcript 4603 (Abst., 1710), two have occurred to my mind which I wish to add; the report of Graham and Philips, and the Geological Report of the United States Survey of the Chicago Quadrangle.

At this point, pursuant to arrangement heretofore made, counsel for defendant thereupon read certain passages in Margry, illustrating the French words employed by La Salle in describing his vessel the "Griffon." (Reading 2 Margry, page 76):

"The fort and the small ships (Navire) which I ordered to be made were begun at the Falls of Conty. The 4641 bark (barque) was begun in the month of May following and put under the sail the 7th of August, 1679, and was lost on the return from the lakes of the Illinois whither I had safely conducted it."

Again on page 76:

"I esteem it impossible to do what M. the Abbe Bernov ordered me, to send to reconnoiter as to whether the great lakes and the great river were navigable otherwise than by a bark (barque) which must hold a very different course from that of canoes, which are obliged always to go as close to land as they can to disembark, as the first wind that blows of which they would not be able to stand the least flurry in the midst of these lakes * * * and the barks (barques) cannot keep too much in the open so as not to be thrown on shore, so that it is necessary to go in a bark to discover the difficulties of the navigation."

On the same page:

"This bark (barque) was absolutely necessary, and one cannot go without it in this enterprise. For the transportation of great burdens, such as the fittings for

the ships (Navire) which I had ordered made in the river of the Illinois, that being impossible by canoe, for although one might use them to bring to the rapids those of the barks (barques) which I had constructed above, it does not follow that one might do so for that ship (navire) in these lakes."

4642 COUNSEL FOR DEFENDANT (continuing): I might state that on other pages he refers to the boat that he was building on the Illinois as a great canoe (canot), page 40, paragraph 2 (reading):

"I had resolved to have built a great canoe (canot) which would be able to descend their river as far as the sea."

The context would show that that was the Illinois, having just stated that he had explained to the Illinois certain things. He gives the projected size of that boat, page 31, November 11, 1680. It shows that he is talking about these things happening at Fort Crevecoeur and shows the dimensions of the boat that he proposed to build.

COUNSEL FOR DEFENDANT (continuing reading, page 31):

"From which place he advanced into the Lake of the Illinois as far as the Huron Islands, where, having sent his bark, he launched out with eight canoes and presented himself in a village of the Illinois, and after having gone somewhat further he commenced a fort named Crevecoeur and a barge of forty tons in order to have it descend into the great river Mississippi which is believed to empty into the great Gulf of Mexico, then he left to present himself at the fort of Frontenac, from there at Montreal, whence he set out again in the month of July to completely accomplish the discoveries."

4643 Again he gives the dimensions of this boat and uses the same term (barque) that he sometimes uses when speaking of the Griffon, as follows (reading page 50):

"Then, in order not to frighten them by the great number of planks needed to finish the ship (navire) which I had projected, and fearing that the barge (barque) which I had in the lakes had just been launched, which had already happened without my knowing it, it might be impossible to bring the gearing of so large a vessel by canoe. I determined for all these reasons to content myself with a barge (barque) which I cause to begun of 42 feet of keel, and only twelve in breadth, and got it so far advanced, that, notwithstanding the work

of the fort, all the planking was sawed, all the wood ready, and the barge (barque) put into twisted wood the first of March."

The word "barque" is used there.

4644 The WITNESS. Part of the time on his trips through the Great Lakes La Salle used the Griffon on the outward voyages; part of the time canoes. In the trip down the western side of the lake in 1679 there were fourteen men in four canoes. The Griffon was a sail boat. Accord-
4645 ing to Parkman's La Salle, page 135, 1896 edition, the Griffon was a vessel of about 45 tons burden. He says in a footnote that Hennepin in 1697 edition states it was of sixty tons, but he preferred to follow the earlier and more trustworthy narrative. The Griffon was designed more as a trading vessel than for exploring as I understand it. Joliet and Marquette used canoes. La Salle used canoes on the trip of 1679. I presume that in this early period a canoe would be the usual method of navigation on the lakes,
4646 and as to what was used when some other method was employed I would need to look that up; it may have been a sailing vessel or some other form. There were very few sailing vessels on the lakes; La Salle's was the first. The period of sailing vessels begins sometime later, although they could stretch a sail over an ordinary canoe, if that may be called a sailing vessel.

According to Hulbert, *Historic Highways*, Volume 9, "Waterways Westward Expansion. The Ohio River and its Tributaries," chapter headed "The Evolution of River Craft" (reading, page 102):

4647 "The batteau, better known in the west as the barge, was a square box of any length, width and depth. It was distinctly a downstream craft, and in the early days rarely ascended with a load any river of current. The canoe and pirogue, compared with the barge, were craft of little burden, though those of generous size would carry the loads of a score of men. The barge or batteau was the freight craft and could be loaded with any burden the stage of water permitted."

Hall in "The West, Its Commerce and Navigation," on pages 9 and 10 appears the following (reading):

"The first boats used in the navigation of the western rivers, were the float boat, the keel, and the barge, the first of which was only used in descending with the cur-

rent, while the two latter ascended the streams, propelled laboriously by poles."

These give as definite a conception as I have of what a barge was; apparently one of them as definite a conception as

Hulbert had of the barge in the period of which he deals, 4648 which is obviously later than La Salle's time.

I understand that La Salle was criticizing the statement by Joliet as to the possibility of passing with a barque through the lakes and down the rivers to the Gulf. More generally I would say that La Salle was criticising Joliet's account of the nature of the water communication between these points.

COUNSEL FOR COMPLAINANT. According to the translation at transcript, 710 (Abst., 294), his language is:

"It discharges by this little lake a part of its waters into the river of the Illinois; and at this time, should one make in summer a little canal of a quarter of a league, says Joliet, from the lake to the basin which leads to the Illinois river, ships could enter into Chicago and descend to the sea. That might perhaps happen in springtime."

Referring to (Trans., 717; Abst., 298), page 267 Vol. 1 of Margry:

"The ship would have to be made in Lake Erie which is near Lake Ontario. It would go easily from Lake Erie into Lake Huron, whence it would enter into Lake Illinois, at the bottom of which the ditch or canal of which I have spoken would be necessary to have a passage into the river St. Louis which empties into the Mississippi."

4649 At this point counsel for defendant read into the record translation from Margry, page 267, which complainant's witness Alvord had theretofore agreed to as being correct (reading):

"The fourth remark concerns a very great and considerable advantage, and which one will perhaps have difficulty in believing: It is that we could easily go as far as Florida in barges"—the French word "barque," whatever you call it, ships or barks—"and by a very fine voyage. There would be only one draine (saignes) to make, cutting a half league of prairie only to enter from the lower part of the lake of the Illinois into the river Saint Louis. Here is the route which one would keep to. The barge would have to be made

in Lake Erie, which is near to Lake Ontario. She would go easily from Lake Erie into Lake Huron, when she would enter into the lake Illinois, at the lower
4650 part of which would be made the trench or the canal of which I have spoken in order to have passage into the River Saint Louis, which empties into the Mississippi, there the barge being navigable easily as far as the Gulf of Mexico.'

COUNSEL FOR COMPLAINANT. What sort of a vessel do you apprehend that the word "barque" refers to in that passage? Such an one as is described in those last two authorities you read, or a sailing vessel?

The WITNESS. I hardly suppose that the barge that Hulbert speaks about would be in the habit of navigating the lakes; evidently La Salle had in mind boats capable of navigating the lakes. Don't know that I could say just what precise form of boat La Salle had in mind. It is my understanding that these terms were not used with mathematical certainty. Sometimes a canoe is called a *batteau*; sometimes the two words are used interchangeably as a *batteau* or a canoe in the French sense, and sometimes a Mackinaw boat is called a
4651 *batteau*. I believe Dr. Thwaites undertook to define a Mackinaw boat by saying it was a large *batteau*. The Mackinaw boat was not in existence at that time. I used it by way of illustration.

As to whether the word "barque" as used at that time, referred to a fairly large type of vessel, some such boat as the Griffon, I am not an authority on that point. Will look it up. Larousse in his dictionary of the French language, the *nouveau Larousse illustre*, gives the derivations of the word *barque*, as from the low Latin "*barca*," which in the old French became "*barge*." He defines *barque* as "the generic name for small boats, with or without decks, and of slight tonnage," and further states that *barque* in speaking of a big ship would be a term of insult. *Quelle barge!* (What a barge!) This being the illustration.

Larousse *Dictionnaire Complet Illustre*, defines *bark* briefly as a small boat. *Petit batteau*.

4652 Guerin, in his *dictionnaire des Dictionnaires*, derives *barque* from the Latin *barca*, a canoe, and defines it as a small boat. *Petit batteau*.

Bellows' French and English Dictionary, defines *barque* by the one word *barge*.

Smyth's Sailors' Word Book defines barge as "a boat long, slight and spacious construction. Also a flat-bottomed vessel of burden used on rivers for conveying goods from one place to another, and unloading and loading ships."

This latter is evidently the sort of boat that Hulbert had in mind.

Patterson's Illustrated Nautical Encyclopedia defines barge as "a large boat in which the oars are double-banked," the word "banked" being explained thus: "A boat is said to be double-banked when two men, sitting on the same thwart pull separate oars."

I can add nothing further at present.

4653 To form an opinion as to what sort of a boat may have been meant one would have to go to a dictionary in which he had confidence, which definition would have been made in the first place from the study of the actual use of the word barque. Another way would be to go to historical sources and find the instances of the use of the word barque which would apply.

4654 I do not understand that such a word is always used in the same sense. For example, canoe is certainly not used to mean always a birch bark canoe which I suppose is the sense in which we usually take the term. Neither is batteau in one given sense. Descriptions of various kinds of batteaux vary. Would have to look into the matter before I could give a final opinion.

4655 Continuing the translation of the document I was reading, at transcript 4630 (Abst., 1716) I come to a further reference to the Desplaines river (reading):

"And then if one should persist in this communication by means of barges (barques) as they cannot navigate in the lakes before mid-April because of the ice and often even later, and because never at this season nor afterwards the rest of the year is Chicagou navigable even for canoes unless after some storm. The waters being always run off in the month of March, it would be easier to affect than transportation from Fort St. Louis to the lake by land, using horses which it is easy to get there."

4657 From my study of historical sources that I have used that bear upon this whole subject, I think on the whole La Salle has given a very good account of the character of the Desplaines river in view of the early period of the white knowledge of this region; that on the whole later accounts of travelers and those who used the river, and so forth, con-

roborate La Salle to a very considerable extent. Do not think La Salle any more than any other man, especially men who explore a region for the first time and early in the period of white men's knowledge, is entirely accurate in all that he said. Even Hutchins, a hundred years after this, was seriously astray in his statement as to the length of the Ohio river, down which he had gone himself. Many early explorers were astray in their statements as to distances. Bearing in mind such corrections and taking La Salle's account with reasonable and proper allowance, I would say that I think it is a very good account. Some of these statements I would accept as fact.

4658 For instance (reading Margry, p. 165):

"Having made my caches I started on the 28th of December and I went on foot where was Sieur de Tonty, the 6th of January, snows having stopped me some days at the portage of Checagou."

I would have no reason for questioning it (reading):

"This is an isthmus of land which is at 41 degrees, 50 minutes elevation from the pole, at the west of the lake of the Illinois, where one arrives by a channel formed by the meeting of many rivulets or gullies of the prairie."

That statement might be open to question. Do not suppose La Salle could make observations as to latitude with the accuracy that they have been since made. I would regard that as only suggestive until further verified. Other
4659 items in that sentence might need further verification, as "it is navigable about 2 leagues as far as the edge of this prairie at a quarter of a league toward the west."

I understand La Salle was fairly accurate in making this statement as to the length the Chicago river was navigable. Evidently he referred to the south branch.

4660 As to the passage appearing at transcript 711 (Abst., 295), which reads (reading):

"That might perhaps happen in the springtime, but not in the summer, because there is no water at all in the river as far down as Fort St. Louis, where the navigation of the Illinois river begins at this season and extends as far as the sea."

Assuming I was entering upon this subject for the first time, I would regard that as suggestive, and would undertake to confirm it or prove it incorrect. That does not go to my opin-

ion as to whether it is correct or not. In a general way have checked that up with other historical sources.

As to whether I find anyone else besides La Salle who states that the river Desplaines has no water at all or that there is no water at all in the river as far down as Ft. St. Louis in the summertime will say I do not suppose it is a proper or reasonable interpretation of this passage that La Salle meant to exclude every bucket of water in the river. He 4661 probably meant that the river was practically dry. I presume a fair translation of the French would mean there was no water at all, and I presume La Salle's literal language was inaccurate. I construe it as meaning practically dry, because I think its literal meaning improbable.

Being asked if I would regard a source which I find is inaccurate and which in its literal language disagrees with the known facts as I have ascertained them in my mind, as worthy of any credence at all, will say I might regard a source which I found inaccurate in its literal language as disagreeing with the known facts as I had ascertained them in my own mind. It would depend on the source. I would not reject it for that reason.

4662 As to whether La Salle had not seen the Desplaines in the summertime when he wrote that, I am not sure that I can answer at this moment.

Q. We went all through his journeyings this morning. I will give you a resume of that as I caught it this morning. It may aid you. We found that he arrived at the St. Joseph river for the first time, I think it was, in the first part of November, 1679. He stayed there about a month and then went down the Illinois to Ft. Creve Coeur; started back from Ft. Creve Coeur in March, 1680, and continued then up to Mackinaw. He came back again from Mackinaw in the fall; I think you said some authorities said he came along the lake in October, reaching the St. Joseph river in November, 1680; went from there down to Ft. Creve Coeur and as I have it here from there to the mouth of the Illinois. Came back from the mouth of the Illinois and went straight along up, arriving at the St. Joseph river in December some time. Wintered at St. Joseph. Left there in March, 1681. Went somewhere, we don't know exactly where, and came back and returned to either St. Joseph or Mackinaw as I caught it. Then he left Mackinaw again in the fall and if my recollection is right arrived at Chicago on December 28, 1681. Then went down

the Desplaines and from there to the mouth of the Mississippi and back again later. It was during that downward journey, as I understand, that this document from which you have read an excerpt was written.

A. Counsel leaves two factors out of account. First factor is that I did not state that this document was written at that time; I said it could not have been written before that time, since it speaks of occurrences at that time. Second is I waived question whether La Salle had been in this region some years before or not. As to first, Margry says these are detached pages of a letter of La Salle's of which he has not been able to recover rest. Not prepared this moment to give further information about it. Document purports to describe "La Salle's arrival among the Illinois. Description of the country down to the junction of the Missouri with that river which the discoverer has named the river Colbert." Then follows quotation just have detailed, "Leaves detached of a letter of La Salle of which I have not been able to find the remainder." From other sources we find that La Salle went clear down to the mouth of the Mississippi on that same expedition. As to whether in that document he only treats of things down to mouth of Missouri will say have not read document through. That is the title as I have indicated. I do not see that that would enable one to come to a conclusion, however, assuming that that is the case. The date of the succeeding document in that book is the 13th and 14th of March, 1682. That might tend to establish the date of the one from which I read, am unable to answer without looking further. Succeeding document evidently refers to the taking possession of the Mississippi Valley that is the country of the Arkansas. That is from a very hasty sight translation. That occurred on the 12th of March, the document being dated the 13th and 14th of March. Further than appears in the record I did not, before I referred to La Salle in this case, endeavor any further to ascertain when this account from which I have read was written. However, by way of explanation, I have made such search of volumes like the Narrative and Critical History, and various volumes of Winsor and Parkman as I was able to in connection with these matters, and over a mass of details, many of which I do not retain in my mind. As to whether the whole volume of Margry purports to arrange these documents of La Salle in chronological

order I would say, after a hasty survey of a portion 4666 of the volume, that judging by the dates I saw given, the documents do seem to be arranged in chronological order. I give opinion for whatever it may be worth in counsel's opinion. Counsel is questioning me about book which have made clear have not read. Therefore decline to form opinion on such hasty examination. Am not able at this moment to fix date of writing of this letter.

Q. Without knowing date of writing, having in view fact it appears in a volume of which preceding and following passages both refer to trips prior to March, 1682, I mean the passage about there being no water at all in the river in the summertime, would you regard what La Salle says there 4667 as worthy of credence at all?

A. If the passage would be confirmed by other sources it would be considered as one link in chain of evidence which might be built up to establish proposition. Would point out in this connection that La Salle had been interested in west and in exploring projects for good many years, and had been in Illinois country off and on since 1679 and may have been in Illinois country good many years before. Doubtless, in view of knowledge of enterprising and energetic character of man, he gathered whatever information he could concerning this region. He purports to be giving in this document an account of condition in this country and he could draw upon any information he had bearing on those conditions in making up that report. Note that Winsor, Volume 4, page 225, footnote 1, refers to this particular document in about way I have already described it. I read (reading):

4668 "Margry (II, 64) gives a fragmentary letter of La Salle describing the country as far as the mouth of the Missouri; and (p. 196) another detached fragment, in La Salle's hand, describing the rivers and people of the new region."

Neither Winsor or Margry saw fit to date letter, so far as can see from reading document. There is no comment on it. Find reference to same letter in Parkman's La Salle's, 1896 edition, page 276, footnote 1. Apparently am not only one who has used document or thought it worth citing. If La Salle had not seen Desplaines river in summer, might or might not regard him careless and inaccurate and unworthy of credence. Would depend entirely on circumstances. If he said sky was blue, even knowing he was blind, need not necessarily discredit his statement. In reference to particular

passage, describing conditions in Desplaines river, especially in stating there was no water in river at all at that time, have indicated what might have been and probably were some of sources of information of La Salle on this subject. 4669 Supposing he did have information from others about conditions in summertime, would not necessarily regard him as careless and inaccurate in undertaking to make any statement about it.

Q. Tell us just why you said at record 3975 (Abst., 1506), speaking of Keating (reading):

"This general criticism, if I may so term it, which Featherstonehaugh has made upon Keating's account of conditions along the Mississippi and the St. Peter's river, tallies very well with what one might gather from a study of Keating's book, as to Keating's observations concerning the Chicago-Desplaines route. At the Chicago-Desplaines portage, Keating, although here in the springtime, although forced to abandon his boat in Mud Lake, does not hesitate to adopt the report or information of others to the effect that this route is a very eligible one in the spring time. Keating goes no further than to the Desplaines, and without further personal examination forms his conclusion as to the navigability at a different season of the year, and as to the ease of canal communication between the two rivers."

Why do you state that of Keating and not of La Salle?

A. In that discussion of Keating I was undertaking to establish the question of the accuracy and care with which the man made his statements, and in pursuit of that undertaking 4670 taking chanced upon various impeachments of Mr. Keating's statements in connection with another region. Among those impeachments were these by Mr. Featherstonehaugh which appear in record. And that turning to his account of Desplaines river region around Chicago, passage across from Chicago river to the Desplaines, I found that the stricture or comments Mr. Featherstonehaugh had made upon Mr. Keating were not at all out of harmony with account Mr. Keating gave, and what appears in his book of things here on which that account was based in story of Long's Expedition in 1823.

Q. That was not what you said, though.

A. There are two lines of evidence, the one corroborating or tending to corroborate the other.

Q. Your criticism of Keating as I read that language, how-

ever, was that without himself having personally familiarized himself with conditions, he had accepted what he had been told by others, and it was for that reason that you said those other general criticisms tallied very well with your criticism.

A. I would like to complete my answer now with reference to La Salle, if I may.

4671 Speaking of La Salle, taking account he left of this region, especially contrasting that with that which Joliet left or which is attributed to Joliet, undertaking to check up those two accounts by various sources of information accumulated since they were put forth, came to conclusion, on the whole, La Salle's account was creditable and accurate. Therefore am inclined to accept what La Salle said and to criticise

Keating in way have done in record. If should find La 4672 Salle's statements seriously impugned by other writers and on examination of his writings should find evidence which made me think he was in habit of making careless and inaccurate and unfounded statements, would have no reason for not coming to similar conclusion with reference to La Salle, as have to Keating. With reference to statement, "That might perhaps happen in the springtime but not in the summer, because there is no water at all in the river as far down as Fort St. Louis," would say it is my understanding historian is expected to mix common sense with work he does. Do not understand it to be common sense to take that statement in its absolute literal sense. With reference to statement as to im-

possibility of floating canoe down river, should suppose 4673 there are times such as the Cass Narrative of 1827 when possibility of floating canoe down river at another period than La Salle has stated here would be evident. Suppose the words "this season" in La Salle's statement refer to his statement immediately before, about mid-April. So far as it refers to impossibility of using canoe in mid-April in Desplanes river, would say probably statement is somewhat stronger than it really should be; would not designate it as utterly inaccurate. Would be inclined to say it is

4674 somewhat better than Benton's "hundreds, nay thousands of boats" statement. Do not see any evidence of prejudice in statement. May be inaccuracy in statement, as have already indicated. These are two quite different statements am asked to compare.

Q. You criticised certain authorities because you said they were inaccurate, exaggerated, showed bias, basis being that

statements themselves were either inaccurate or exaggerated in your judgment. I want to know if same reasoning does not apply to La Salle when you find such a statement?

A. Graham and Phillips show not enough water in the Desplaines six months out of year to float boat. Charlevoix states that at that season of year, particular year being 1721, it 4675 was current information that Desplaines or upper part of Illinois would not afford water enough for his canoe. St. Cosme shows river practically dry at time he undertook to use it. Same account shows Tonty, who at that time must have been well acquainted with Desplaines preferred a twenty-five or twenty-seven mile portage to making the attempt to pass down it. Appears from other accounts in time of rain or immediately after and in time of freshets, Desplaines could be passed in canoe. To that extent think perhaps this account of La Salle's was too strong, although he points out "unless after some storm," evidently having such condition as that in mind.

Q. Now, will you answer my question please.

Mr. SCOTT. Objected to as having been answered, being merely argument with witness.

A. If La Salle makes statement that is not valid or is inaccurate or exaggerated, he is subject to criticism same as anyone making such a statement. My opinion as to accuracy of precise statements of La Salle's to which my attention has been directed is that on whole it is reasonably accurate and credible one. Have answered question as to how regard La Salle as independent authority and have tried to give attitude toward whole document and toward La Salle's account of conditions in this region. Taking La Salle independently, without further corroboration, instead of 4677 saying they were suggestive merely on these points, I believe 4678 made a distinction. I said some of them I would be inclined to accept without question. Should think if one were trying to get at bottom of statement that there was no water at all in the summertime, and then statement that even canoes could not use it at this season, he ought to check statements up as I have tried to do and I have come to conclusion indicated in preceding answers. Reading statement from record at page 712 (Abst., 295), "Again navigation would be for only a short time, at most for 15 or 20 days in the years, after which there is no longer any water," as to whether I regard that statement as suggestive or as conclusive, will say seems to me I have answered. Should take such statement and

before coming to final conclusion should undertake to
 4679 check it up. Have tried to check it up. La Salle is evi-
 dently speaking here of boats which came down from
 the lake; is criticising Joliet's account; speaking of boats
 which come from lake and go on up the Chicago and down the
 Desplaines river. Understanding is that period during year
 during which that could be done is very short. 15 or 20
 days might not be entirely accurate. Would not undertake
 to approve statement as to detail, but in general account is
 not far wide of mark in way La Salle himself used it. Should
 say is pretty well corroborated by Graham and Philips' state-
 ment that for six months in year Desplaines could not float
 a boat. Would add to that about three months in winter
 season, which, added to Graham and Philips' six months,
 would make approximately nine months. Said perhaps La
 Salle's 15 or 20 days was not entirely accurate. That would
 4680 cut down the discrepancy somewhat. My opinion as to
 whether or not La Salle had ever been in this Illinois
 country before 1679 is that Parkman thought he had;
 Margry also; Winsor does not think he had been. Parkman
 thought he went down Ohio as far as Louisville. Margry
 would have him go further. Not sure that Winsor's opinion
 is on this point. Reading evidence on which I based my
 statement as to Parkman's opinion in this matter. Footnote 3
 (reading):

"Decouvertes, etc., II, 285. The literature of this con-
 troversy is reviewed on a later page. Parkman thinks
 that La Salle crossed the Chicago portage and struck
 4681 the upper waters of the Illinois, but did not descend
 that river, and suggests that the map called in a later
 sketch 'The Basin of the Great Lakes' is indicative of
 this extent of La Salle's exploration in the mere begin-
 ning of the Illinois river which it gives. Others reject
 the "Histoire" altogether, as Hurlbut does in his Chicago
 antiquities, p. 250, not accepting Parkman's view that
 La Salle was at Chicago in 1669 and 1670. Dr. Shea
 holds it was the St. Joseph's river which La Salle en-
 tered."

There is further evidence in body of chapter which Winsor
 wrote which I had in mind when making statement. Page 21
 of the 1896 edition of Parkman's La Salle, an account of the
 expedition from which I read (reading):

"We return now to La Salle, only to find ourselves in-
 volved in mist and obscurity. What did he do after

he left the two priests? Unfortunately, a definite answer is not possible; and the next two years of his life remain in some measure an enigma. That he was busied in active exploration, and that he made important discoveries, is certain; but the extent and character of these discoveries remain wrapped in doubt. He is known to have kept journals and made maps; and these were in existence, and in possession of his niece, Madeleine Cavelier, then in advanced age, as late as the year 1756; beyond which time the most diligent inquiry has failed to trace them. Abbe Faillon affirms that some of La Salle's men, refusing to follow him, returned to La Chine, and that the place then received its name, in derision of the young adventurer's dream of a westward passage to China. As for himself, the only distinct record of his movement is that contained in a paper entitled 'Histoire de Monsieur de La Salle.' It is an account of his explorations, and of the state of parties in Canada previous to the year 1678; taken from the lips of La Salle himself, by a person whose name does not appear, but who declares that he had ten or twelve conversations with him at Paris, whither he had come with a petition to the Court. The writer himself had never been in America, and was ignorant of its geography; hence blunders on his part might reasonably be expected. His statements, however, are in some measure intelligible; and the following is the substance of them. After leaving the priests, La Salle went to Onondaga, where we are left to infer that he succeeded better in getting a guide than he had before done among the Senecas. Thence he made his way to a point six or seven leagues distant from Lake Erie, where he reached a branch of the Ohio; and, descending it, followed the river as far as the rapids at Louisville, or, as has been maintained, beyond its confluence with the Mississippi. His men now refused to go farther, and abandoned, him escaping to the English and the Dutch; whereupon he retraced his steps alone." There is a footnote (reading):

"This must have been in the winter of 1669-1670, or in the following spring; unless there is an error of date in the statement of Nicholas Perrot, the famous voyageur, who says that he met him in the summer of 1670, hunting on the Ottawa with a party of Iroquois.

But how was La Salle employed in the following year?

The same memoir has its solution to the problem. By this it appears that the indefatigable explorer embarked on Lake Erie, ascended the Detroit to Lake Huron, coasted the unknown shores of Michigan, passed the straits of Michillimackinac, and, leaving Green Bay behind him, entered what is described as an incomparably larger bay, but which was evidently the southern portion of Lake Michigan. Thence he crossed to a river flowing westward—evidently the Illinois,—and followed it until it was joined by another river flowing from the northwest to the southeast. By this, the Mississippi only can be meant; and he is reported to have said that he descended it to the thirty-sixth degree of latitude; where he stopped, assured that it discharged itself not into the
4684 Gulf of California, but into the Gulf of Mexico; and resolved to follow it thither at a future day, when better provided with men and supplies.”

There is another footnote (reading):

“The first of these statements,—that relating to the Ohio,—confused, vague, and in great part incorrect, as it certainly is, is nevertheless well sustained as regards one essential point, La Salle himself, in a memorial addressed to Count Frontenac in 1677, affirms that he discovered the Ohio, and descended it as far as to a fall which obstructed it. Again, his rival, Louis Joliet, whose testimony on this point cannot be suspected, made two maps of the region of the Mississippi and the Great Lakes. The Ohio is laid down on both of them, with an inscription to the effect that it had been explored by La Salle.”

(Reading):

“That he discovered the Ohio may then be regarded as established. That he descended it to the Mississippi, he himself does not pretend; nor is there reason to believe that he did so.

With regard to his alleged voyage down the Illinois the case is different. Here, he is reported to have made a statement which admits but one interpretation—
4685 that of the discovery by him of the Mississippi prior to its discovery by Joliet and Marquette. This statement is attributed to a man not prone to vaunt his own exploits, who never proclaimed them in print, and whose testimony, even in his own case, must therefore have weight. But it comes to us through the medium of a

person strongly biassed in favor of La Salle and against Marquette and the Jesuits."

Here I read a footnote:

"One of these maps is entitled *Carte de la decouverte du Sieur Joliet, 1674*. Over the lines representing the Ohio are the words, '*Route du sieur de la Salle pour aller dans le Mexique.*' The other map of Joliet bears, also written over the Ohio, the words, '*Riviere par ou descendit le sieur de la Salle au sortir du lac Erie pour aller dans le Mexique.*' I have also another manuscript map, made before the voyage of Joliet and Marquette, and apparently in the year 1673, on which the Ohio is represented as far as to a point a little below Louisville, and over it is written, '*Riviere Ohio, ainsy appelee par les Iriquois a cause de sa beaute, par ou le sieur de la Salle est descendu.*' The Mississippi is not represented on this map; but—and this is very significant, as indicating the extent of La Salle's exploration of the following year—a small part of the upper Illinois is laid down."

Would understand that it is to these portions of Parkman's work that Winsor probably refers to the statements which I have read in giving first part of answer. Have not looked further to learn whether he refers only to this footnote. Do not know that I have opinion whether or not he had gone down Desplaines at this time we just discussed. Have an impression that a clear case has not been made out; that whole thing is in doubt and obscurity, as Parkman indicates. I intended after reading footnote to read rest of chapter (reading):

"Seven years had passed since the alleged discovery, and La Salle had not before laid claim to it; although it was matter of notoriety that during five years it had been claimed by Joliet, and that his claim was generally admitted. The correspondence of the governor and the intendant is silent as to La Salle's having penetrated to the Mississippi; though the attempt was made under the auspices of the latter, as his own letters declare; while both had the discovery of the great river earnestly at heart. The governor Frontenac, La Salle's ardent supporter and ally, believed in 1672, as his letters show, that the Mississippi flowed into the Gulf of California; and two years later, he announces to the minister Colbert its discovery by Joliet. After La Salle's

death, his brother, his nephew, and his heirs addressed a memorial to the king, petitioning for certain grants in consideration of the discoveries of their relative, which they specify at some length; but they do not pretend that he reached the Mississippi before his expeditions of 1679 to 1682."

Here is another footnote with reference to the French Document (reading):

"This silence is the more significant, as it is this very niece who had possession of the papers in which La Salle recounts the journeys of which the issues are in question. Had they led him to the Mississippi, it is reasonably certain that he would have made it known in her memorial. La Salle discovered the Ohio, and in all probability the Illinois also; but that he discovered the Mississippi has not been proved, nor, in the light of the evidence we have, is it likely."

Next authority I refer to is Joutel upon question of difficulty in use of Desplaines. He described difficulties as chiefly excess of water in the river. Will add another to list. It is account which Joutel gives of failure of men from Montreal to pass Desplaines. All the difficulties Joutel records proceeded from this one cause, excess of water and too

rapid current. He points out they came to rapid 4689 stream which obliged them to go ashore. Then into water, dragging canoe along; that he hurt one of feet against rock which troubled him long time; that they were under necessity of going into water often causing him to suffer extremely, more than he had done since their departure from Gulf of Mexico. As to La Salle's statements about difficulty of using Desplaines in summer and mid-April and there being no water in it at all in the summer time, there is generally corroboration of La Salle's narrative in

4690 Joutel. Believe difficulties described by Hubbard on his first trip are about same in character as those encountered by Joutel. Taking the authorities chronologically, next to Joutel would be men he speaks about in that year or preceding autumn. Joutel's account of men from Montreal summarizing on page 196 of Stile's edition of Joutel, is that in December two men arrived at the fort from Montreal and they came to give notice to Tonty that three canoes loaded with merchandise, powder and ball, etc., had been brought 4691 to Chicago, but there being too little water in the river and this being frozen, they could come down no lower

and so they desired or they informed Tonty it was necessary to send men to bring them. Tonty sent some forty Indians and the goods were transported presumably to the fort from Chicago. Might point out in this connection here is bit of evidence in answer to question asked me sometime ago as to character of boats in which early explorers navigated lakes. These men evidently went in canoes, and men of St. Cosme's party also went in canoes. Next chronologically, Marquette's surgeon. Referring to Vol. 59 of the *Jesuit Relations*, p. 183, page containing Dr. Thwaite's translation of concluding portion of Marquette's journal of second expedition under date of April 6th, stands in margin and I think is by Marquette himself because I find on opposite page a French 4692 indication of April (reading):

"We have just met the surgeon, with a savage who was going up with a canoe load of furs; but, as the cold is too great for persons who are obliged to drag their canoes in the water, he has made a chache of his beaver skins, and returns to the village tomorrow with us."

Would observe water was too high at this time; that surgeon, who apparently had been spending winter in region below Chicago, was now attempting to bring canoe load of furs up Desplaines river and found it necessary to pull canoe in water as Joutel has described that his party found it necessary to do. Just preceding this, Marquette speaks of the height of the water, page 181, 31st of March (reading):

"The very high lands alone are not flooded. At the place where we are the water has risen more than 12 feet."

4693 Tonty would be next. This is a document entitled "Relation of Henry de Tonty, Enterprises of M. de laSalle, from 1678 to 1683." Relation written at Quebec or from Quebec 14th November, 1684, by Henry de Tonty, found in Margry, vol. 1, p. 573. Passage here in mind occurs on page 612 and circumstances are these; that La Salle had been down to the mouth of the Mississippi river in 1682 and on return fell sick and tarried for time at Fort Prudhomme, which I believe was somewhere in region of modern Arkansas; here he sent Tonty ahead to his fort, and Tonty comes up the Illinois, then to Lake Michigan and finally to St. Joseph river (reading translation of the original French):

"On the 18th being in sight of the village the chiefs came out to see me and we went in company to the

village. The 20th after having made them son present I set out and arrived on the 27th at the Village of the Illinois, which we found abandoned because the fear which they had of the Iroquois. The water being very low, I was obliged to abandon my canoe and to walk on land to gain the lake which is at forty leagues from there."

Understand then Tonty came up in canoe up Illinois river to Illinois Village, which would be approximately Starved Rock, and was forced because water was low to abandon canoe there and walk to lake. Further, that when he got to edge of lake found Outagamie Indian who sold him his canoe and so presumably in this canoe he states he gained 4694 the river of the Miami; that is, the modern St. Joseph. Month is given. On page 611 I read, immediately preceding (reading):

"And as there were pressing affairs at the river of the Miamis, I started on the 4th of June," with the man named and then it goes on to give an account of the passage 4696 up the Illinois. The 18th of June it would be. Will admit to list of sources, or of travelers, Schoolcraft's account of traders he met. Understood Tonty was going, at time mentioned in passage I read just previous to adjournment last night, from point where he left La Salle at Fort Prunhomme or thereabouts on the Mississippi up the Illinois to Lake Michigan, and thence to the Fort on St. Joseph river. His ultimate destination was either fort on St. Joseph or Mackinac. He went on to Mackinac later. Would suppose he left Illinois river at junction of Illinois and the Desplaines. That supposition is based on inference or a deduction. Passage states that he arrived on the 27th at the Village of the Illinois, which he found abandoned through fear of Iroquois. Waters being very low, says he was obliged to abandon his canoe and walk on land to gain lake, which is 40 leagues from there. Would judge from whole passage it is contentions of witnesses for United States he left river at Village of Illinois; think in general have no occasion for dissenting 4697 from this, that in passing up and down this general route they followed along the river. If traveler was Starved Rock and destination was Chicago, he would be likely to come up general Illinois-Desplaines route. Since Tonty went on land, he may not have done this. Think no one can say just where he left river of Illinois. Think he abandoned his canoe at Village of Illinois. That would be approx

mately in neighborhood of Starved Rock. Would say this is very brief description of this passage, statement being: having arrived at the Village of the Illinois on the 27th, and finding it abandoned, he goes on to say:

"The waters being very low I was obliged to abandon my canoe and to walk on land to gain the lake, which is at forty leagues from there."

Assuming village of Illinois was in neighborhood of Starved Rock, would be some distance below mouth of Desplaines; not able to give exact distance without verifying it. My 4698 impression is some thirty miles would be approximately correct. Would not say there is nothing to show route which Tonty took overland from that point. He made a passage, evidently of forty leagues to the lake. He evidently did not come out at the lake at the mouth of St. Joseph river, as further it says he had good fortune on edge of lake to find Indian who sold him his canoe and then he gained the river of the Miamis. I gave what I supposed would be a reasonable deduction; that he came up this general river route at that time; is entirely possible, there being no mountainous country in this vicinity, that he may not have stuck to the river. Do think it reasonably certain he came out at this southwestern corner of Lake Michigan at some point. Any deduction drawn as to route followed by Tonty must be based 4699 merely on inference and evidence that occurs in the document, part of it being statement that he came out on the lakes somewhere and took canoe to reach the St. Joseph river; also, that this place is forty leagues from lake; he abandoned his canoe; assume it fair to say at this place, already pointed out; walked forty leagues to lake. We know that making a trip from Starved Rock to lake, a forty league trip, one would come up in general along the line one would naturally draw between here and Starved Rock. Am not attempting to show he used Desplaines. Cited this for the reverse; that he did not see the Desplaines. May have walked along bank or may have taken a bee-line; just where that bee-line would take him there is no way of showing. Should judge he could not have followed the Kankakee very far, for he came out at the lake after walking forty leagues. If he followed Kankakee there would be no sense in his coming out to lake at all; he would have followed it on up, unless he cut across the country which is possible. Tak- 4700 ing up Joutel, would say I intend to materially revise my estimate of the Joutel narrative, for, on looking over

original narrative in Margry, Vol. 3, which Alvord referred to in the paragraph he cited at transcript 106 (Abst., 45), I observe that the English translation of Joutel which was used principally in the case is not a reliable and accurate account of what Joutel really wrote. Turning to Margry I find conclusions I have drawn and statements made and others have made in this case, based on English translation of Joutel's Journal, which has been used principally in the case, must be materially modified; that they are inaccurate in certain important respects. Most logical way of taking this up would be to present bibliographical side first, page 240, Vol. 4, 4701 Winsor's Narrative and Critical History, occurs some account by editor, Mr. Winsor, of the Journal of Joutel; having referred to preceding document to get connection, I read (reading):

"It is thought that a Journal by Joutel was written in parts to counteract the statement of the Dernieres decouverts. This Joutel paper was given first in full by Margry, (Footnote 5), and Parkman says of it that it seems to be 'The work of an honest and intelligent man.' (Footnote 7.) It was printed in Paris in 1713, but abridged and changed in a way which Joutel complained of, and bore the title, Journal historique du dernier voyage que feu M. de la Salle fit dans le Golfe du Mexique, pour trouver l'embouchure du Mississippi. Par M. Joutel."

Turning to Footnote 8 (reading):

"In 1714 an English translation appeared in Paris, as a journal of the last Voyage performed by Monsr. de la Sale in the Gulph of Mexico, to find out the Mouth of the Mississippi river; his unfortunate Death, and the Travels of his Companions for the Space of Eight Hundred Leagues across that Island Country of America, now call'd Louisiana, translated from the Edition just publish'd at Paris."

Would say now have in hand what appears to be this 1714 edition Joutel's Journal.

4702 I turn to page 47 of the English translation of 1714 (reading):

"The Preface. Written by Sieur de Mitchell, who methodiz'd this journal."

Winsor says it is work of an honest and intelligent man, and at page 397 Parkman's La Salle, 1896 edition, footnote

2, the chapter dealing with La Salle's assassination, I read (reading):

4703 "Of the three narratives of this journey, those of Joutel, Cavelier and Anastase Douay, the first is by far the best. That of Cavelier seems the work of a man of confused brain and indifferent memory. Some of his statements are irreconcilable with those of Joutel and Douay; and known facts of his history justify the suspicion of a willful inaccuracy. Joutel's account is of a very different character, and seems to be the work of an honest and intelligent man. Douay's account is brief, but it agrees with that of Joutel in most essential points."

I now turn to the original French of Joutel's Journal, Margry, Volume 3, page 480, "travelers have come to Fort Lewis from where La Salle was assassinated to Canada."

I do not attempt to make a hard and fast literal translation, but give what seems to be the force and meaning 4704 of this narrative (reading):

"M. Cavelier having spoken to Boisrondet to find for us a canoe and people to conduct it for us, as there was little time to lose because the season was advanced and it was necessary to act diligently, the Sieur told us that he had a canoe having bought it in the expectation of going to Canada in the spring, seeing that they had thought us all lost or dead, but that the difficulty would be to get men or have men who were expert enough; seeing that all those who were with Monsieur Tonty.

Nevertheless three men offered to conduct us. One was a blacksmith engaged by Tonty and La Forrest in whose hands La Salle had left the fort, as also that of Frontenac."

Cavelier objected to the blacksmith leaving on account of his usefulness at the post. They fixed that matter up and found another blacksmith, and paragraph concludes with a reference to necessity of taking food and skins on their way to Mackinac, hence the desirability of having a canoe 4705 (reading, page 482):

"To continue the recital of our voyage, the Sieur Boisrondet, the clerk of M. de La Salle, proposed to the chiefs of the Shawnees to give us some of their people in order to carry the goods to the entrance of the lake of the Illinois, distant from this fort about 35 or 40 leagues, for the reason that in this season there was

no water at all in the river, or at least very little, this being a troublesome matter.

It is not the same in descending, for the navigation is very fine as far as the River Colbert, where there are almost a hundred leagues without any fall or rapid. About five leagues above the said fort there is a rapid and one is obliged to take in order to descend or ascend it a certain time.

Which is ordinarily the spring time or the autumn after some rain, seeing that the said river forming itself from many other little ones, becomes shallow since these have drained away, or when these little ones have drained away. The chief of the Shawnees having promised us some men, we disposed everything for the departure."

4706 He then speaks of paying the Indians who assisted them in their passage to Fort Lewis (reading page 483):

"Everything being arranged, we proposed to depart or intended to depart."

On page 484, that section of the chapter reads (reading):

"Wednesday the 17th there arrived three men in all haste from Mackinaw."

This is the 17th of September, and not December as the English translation of Joutel's Journal makes it, "and as I remarked above or before that there was hardly any water, (possibly that should be no water at all in the river,) they had been obliged to leave their canoe at the edge of the lake."

(Reading):

4707 "This came about or happened quite conveniently,"

the effect of the remainder of the sentence being I will say, that they could change their own canoe at Fort Lewis for the one which these men had left at the border of the lake, and therefore the latter were content with this arrangement, so that on the 18th, Thursday, having prepared all their little equipage, they took leave of those who lived at the fort and to the number of eight Frenchmen they departed. The five who were in the Joutel party and the three who were to conduct them to the lake, and along with these a dozen savages who were going to carry their goods or food, and some twenty-five or twenty-six otter skins, and also some beaver skins which they were taking with them in order to procure food and other things at Mackinac, and other points on their journey in case they should have the opportunity or find the need for them.

It seems evident from the narrative that these men came down from Montreal to Chicago in September rather than December; failed to carry goods in canoe down Desplaines, not because river was frozen, one reason assigned in Stiles Edition of Joutel, but because there was no water in river, the other reason given in Stiles Edition.

4708 Joutel's party would doubtless have gone from Fort Lewis to Lake Michigan in a canoe had that been practicable, for they engaged canoe at Fort Lewis and men to carry goods to lake at which point they were going to launch canoe and proceed on journey to Mackinac.

Another consideration was their inability to get skilled canoemen. Evidently ordinary men could not make the passage up the Desplaines, which may have had something to do with decision to make portage rather than go up the river. Members of party themselves evidently not at all skillful.

The next paragraph deals with their further fortunes in their trip to Chicago. I read, comparing the original in Volume 3, Margry, 485, to the translation appearing at transcript page 106 (Abst., 45). There is evidently some error in
4709 the translation. With both passages before me I undertake to give the substance of original text (reading):

"We continued to travel until Thursday, the 25th"—

The March, 1687, which is put in the translation in parentheses is not found in the original, and the month given there is obviously erroneous for this is not March but September, this being the continuation of the recital of the fortunes of this Joutel party in the autumn of that year.

(Continuing reading):

"Until the 25th, when we arrived at the place called Chicagou, which, according to what we were told, took its name from the quantity of garlie which grows in the woods in that region."

(Reading):

"There is there a little river which is formed of the waters that drain from a great prairie or field at this place, and which takes its course towards the lake named, as I have said elsewhere, Illinois or Michigan. About three or four leagues away on the other side of the great prairie, the waters discharge into the Illinois river and form that."

4710 I now read from another translation of this, than that appearing in the record.

COUNSEL FOR DEFENDANT. It is one of our memoranda; it is not a published translation.

Mr. CRESSY. Whose translation is it?

The WITNESS. It is Miss McIlvaine's translation, I understand.

COUNSEL FOR DEFENDANT. The thing is, doctor, if you adopt it as a correct translation.

A. (Reading):

"It seems that this place must be the highest between the Gulf of Mexico and the River Saint Lawrence, seeing that the waters take their course from this place to go on the one side and on the other, so that the higher the waters are the less there is to carry."

Summarizing the expedition, they found the canoe which the Frenchmen had left at the lake, embarked in it and undertook their journey, failed turned back and made way to fort on Illinois and passed winter there. Next spring same party set out from Fort Lewis up river to Chicago; difficult 4711 because of excess rather than lack of water in Des-plaines.

As to whether counsel for government is correct in saying that I mean that Joutel wintered at Fort St. Louis and came up again in the spring I will say am speaking of party which this Joutel narrative deals with. On page 489 Margry, it appears that after their failure to continue journey, they returned to Fort St. Louis, arriving October 7th. Page 497 of the account speaks of men coming from Montreal to the fort with information that they left canoes at Chicago, where

Joutel's party had made their cache. That there was 4712 too little water in the river and that little was frozen.

As to how Joutel states he came back to Fort St. Louis from Chicago, it appears in 3 Margry, page 489, that they put their canoe on an eschafaud, (trestle) following which they retraced their route to Fort St. Louis.

4714 Chronologically the next authority I suppose would be St. Cosme, who came in early part of November. The nature of the difficulties he encountered appears from Shea's Early French Voyages, page 54 (reading):

"On the 24th of October, the wind having fallen, we made our canoes come with all our baggage, and perceiving that the waters were extremely low, we made a cache on the shore and took only what was absolutely necessary for our voyage, reserving till spring to send

for the rest, and we left in charge of it Brother Alexander, who consented to remain there," and so forth. Difficulties appear to have been due to lack of water in Desplaines river.

As to whether St. Cosme made portage from the Chicago to the Desplaines, which he describes as one of about 3 leagues, would say St. Cosme says:

"The next day we began the portage which is about three leagues long when the water is low and only a quarter of a league in the spring."

I suppose it is a fair conclusion since water is evidently low at this time that he portaged three leagues from the Chicago to the Desplaines.

4715 At this point the boy became lost; St. Cosme left party to go back and hunt for boy; party went on without him.

On page 56 it is simply stated:

"I set out the 2nd of November in the afternoon, made the portage and slept at the River of the Illinois."

Do you understand St. Cosme was using boat on this trip; was going on land. He merely had stayed at Chicago to hunt for boy and started out to catch up with the party which had gone on ahead with the boat. Reading further, St. Cosme evidently also had a boat (reading):

4716 "We went down the river to an island. During the night we were surprised to see an inch of snow and the next day the river frozen in several places, yet we had to break the ice and drag the canoe, because there was no water; this forced us to leave our canoe and go in search of Mr. de Montigny, whom we overtook next day, the 5th of the month, at Stag Island (Isle aux Cerfs). They had already made two leagues portage, and there were still four to make to Monjolly, which we made in three days and arrived on the 8th of the month. From Isle a la Cache to Monjolly is the space of seven leagues. You must always make a portage, there being no water in the river except in the spring."

There are evidently two names for the island or islands. He speaks of Stag Island first and then he speaks of Isle a la Cache. Have never taken time to locate that island. Where he says, "We went down the river to

4717 an island," do not know what that might refer to. In the manuscript account Hubbard left of this same passage of Desplaines the matter is presented materially dif-

ferent from the passage appearing at page 41 of Hubbard's life, which reads:

"Our boats being again loaded we resumed our voyage down the Desplaines until we reached Isle La Cache where the low water compelled us to again unload our goods in order to pass our boats over the shoal that here presented itself."

The manuscript states that "it was about a week before our boats were again loaded and ready to descend the Desplaines, the water of which being low floated the boats but short distances before it became necessary to lighten them, often taking all the goods out and passing the boats on rollers over the ripples to floating water."

4718 Evidently from this account they did not make a continuous voyage from point where they entered Desplaines until they reached Isle la Cache.

As to whether the whole account just read from Hubbard manuscript, refers to the whole length of the Desplaines, from the Chicago portage down to the mouth or whether it refers to the Desplaines from the portage down to Isle la Cache will say the whole account from which I have read refers to whole passage to Starved Rock on the Illinois river, but it is plain they made more than one portage.

4719 Without looking it up cannot state distance from Chicago portage to Cache Island. If I suppose it was 20 miles, that fact coupled with St. Cosme's description of other portage, would not satisfy Hubbard's statement that they only proceeded short distances. Since Desplaines is about fifty miles long from the portage to its mouth, it is hardly reasonable to interpret twenty miles as a short portion of the distance. If they made frequent portages, they could not have made many twenty mile passages in the whole length of Desplaines from portage to its mouth. (Reading):

"During the night we were surprised to see an inch of snow and the next day the river frozen in several places, yet we had to break the ice and drag the canoe because there was no water."

I find no inconsistency between those statements of St. Cosme's account which would lead me to look upon it with suspicion. The historian necessarily and properly takes into account the character of the sources and circumstances under which produced. This is a letter written by a traveler on a journey under primitive conditions and

circumstances. Therefore could not expect it to be written with finish and care of an essay of Macauley or Emerson. I would not say that that statement would cause me to suspect the veracity of St. Cosme.

As to my conclusion whether St. Cosme took his canoe out of the water at that point, I imagine if there was no water there he would find it difficult to take it out of the water unless he was a magician. I do not conclude that the passage means there was no water there; I have drawn no conclusion as to that. I suggest this as a reasonable

4722 common sense interpretation. He says there was snow during the night and the next day river was frozen. If it was frozen there must have been water to freeze. Then he says they had to break the ice and drag the canoe because there was no water. I suppose he meant that there was no water in a position available for floating canoe in it. There must have been congealed water in the form of ice. It is not improbable there may have been water under the ice.

Q. On that assumption, what do you conclude whether or not they pulled the boat along in the water or took it out and carried it along the land?

Objection; narrative leaves nothing for deduction.

A. I conclude they dragged the canoe.

4723 Q. In the water or along the land?

Objection, incompetent, immaterial and irrelevant.

A. I should not undertake to draw a conclusion on that point. It seems to me it is hair-splitting. No conclusion warrantable. They were dragging the canoe evidently because it was impracticable to paddle it.

Suppose dragging the canoe would amount to making portage in usual sense. Believe there is a technical application of the word that travelers distinguish and call a transportation of this sort along the river by another term, but waiving that I suppose it would be reasonable to consider that a portage, if not a portage a carriage.

4724 As to whether the part of St. Cosme's party who had gone on ahead, portaged from the island where they stopped and found the water frozen, and so forth, the statement is they had already made two leagues portage and there were still four to make to Monjolly.

Q. Do you think they began their portage at that island?

Objection; incompetent, irrelevant and immaterial.

A. If counsel asks the basis of my statement of the number of leagues portage which St. Cosme said they made, I can

answer quickly. I simply added up the different statements, made here and found it totaled 17 leagues and a fraction; then turned to the other letter and found the statement that they made a portage or portages of fifteen leagues, and I said the two accounts corroborated each other well in that respect. That was the basis of my testimony.

4725 Don't know where the island was. As to the length of portage made by the parties that went ahead, he says they had already made two leagues portage, and there were still four to make. Further down he says:

"From Isle a la Cache to Monjolly is the space of seven leagues. You cannot always make a portage."

Evidently there is some discrepancy between last statement and result which would be reached by adding up figures given in preceding statement. I am not certain the two statements referring to same part of river.

4726 I can determine what the account says as to the number of leagues made by either party. I suppose they had no surveyor along to actually determine distances they portaged and floated, assuming they floated at all in the stream. One must make allowance for statements as to distances which travelers on such an expedition leave; would suppose men having gone down the river in this way were familiar in general, and the writer of this letter was, with the circumstances which attended the passage he made down the river.

Q. But you have not answered my question, my question whether or not you can determine from the figures there set out, the number of leagues of actual portage, without
4727 first being able to ascertain whether or not the place where the portage was made was between Cache Island and Monjolly?

After colloquy of counsel, question withdrawn and this question substituted:

Q. Did you in computing the number of leagues of portage that St. Cosme's amount shows he made add the 7 leagues mentioned as the distance between Cache Island and Monjolly to the other 6 leagues mentioned in the previous passage?

A. I believe I did in the calculation based on St. Cosme's letter itself. The other calculation was not a calculation but merely a reading of La Source's statement that they had to portage fifteen leagues, or to that effect; whatever the exact wording was.

4729 I understand Cache Island is above Mount Joliet. St. Cosme's account states when he caught up with the remainder of his party, they had made 2 leagues portage, and that there were 4 more to make to Mount Joliet, "which
4730 we made in three days and arrived on the 8th of the month."

It follows that the distance from Cache Island to Mount Joliet is 7 leagues. From the consideration of this passage alone, I suppose it is a reasonable construction that what St. Cosme means is that when he caught up with the party, they were making the portage of six leagues between Cache Island and Mount Joliet. Would consider it a prudent operation to first locate these various islands; I suppose it would be reasonable to construe the passage as meaning that when he caught up with them, they were four leagues from Mount Joliet. Possibly if I had a map of the Desplaines showing these various features, it might lead me to another interpretation.
4731 In accordance with the answers I have given, I would be inclined to say that there was a distance from Cache Island to Monjolly in which six leagues of portage were necessary. We have in the account a mention of a portage of about three leagues from the Chicago to the Desplaines, and a portage of six leagues from somewhere above Monjolly to Monjolly. On the basis of the construction assumed, I believe it is correct. The next mention of a portage is a short one of about a quarter of a league some distance below that. The next one is a portage of one league; it states:

"On the 10th we made the little portage and found half a league of water, and then two men towed the canoe for a league; the rest marched on land, each with his pack."

4732 Next it says they "stopped for the night at a little portage five or six arpens off." I believe there was no more portage before they reached Kankakee. According to a note, an arpen is about 200 feet. Three leagues from the Chicago to Desplaines; six between Cache Island and Mount Joliet, or just above Monjolly; a quarter of a league some distance below; one league below that and five or six arpens in addition, makes a total of somewhere between 10 or 11 leagues. However, I have not given any opinion as to the location of Cache Island, of which on the basis of that
4733 computation, three leagues would be the distance between the Chicago and Desplaines, leaving 7 or 8 leagues

of portage altogether between the time they embarked on the Desplaines and the time they reached its mouth.

As have pointed out, am not prepared to locate Isle a la Cache, therefore am not prepared to say that the computation is correct.

4734 Counsel is aware that I am speaking in ignorance of the exact location of these features of the river that are referred to here. I point out in this connection that Tonty was the conductor of this expedition, and preferred the route by way of the Root river and the Fox, with the expectation of a nine league portage with the view of shortening their way.

4735 Being asked to give my computation of the portage in miles will say LaSource made the statement about 15 leagues of portage. Referring to LaSource's letter, page 83, I read (reading):

"We left there on the 27th to return to the Tonicas;

4736 Mr. de Montigny and Mr. de St. Cosme resolved to go up together to bring down the things left at Chicagou where Brother Alexander had remained to guard them, because there was no water in the river of the Illinois. We brought only a canoe load of absolute necessities, which we had to carry for the distance of fifteen leagues."

Do not see whether it is finally evident whether the 15 leagues includes the crossing of the portage or whether that applies only to the crossing of the Illinois. In the former case it would be something like 45 miles; in the latter case something like 36 miles, assuming for convenience that the league is three miles, which is not quite exact.

4737 Counsel's computation is not an inevitable one, that they portaged something less than 36 miles, out of a total of 50 miles, or something less than 50 miles between the Chicago portage and the mouth of the Desplaines.

The total length of the Desplaines from the portage to the junction with the Kankakee, is something less than 50 miles, in the neighborhood of 15 leagues. See no particular reason for bringing into this computation the element of 60 miles at all, for it is plainly evident that they did not make a portage from the edge of Lake Michigan up to the south branch of the Chicago river, at least, if they did, there is no mention of it and I am not aware that it was ever done in the summer season. Assuming they had begun the portage when they left

the south branch of the Chicago river, it would be something like 15 leagues out of something over fifty miles.

4738 I have before me a map entitled: "Map of the counties of Cook and DuPage, and east part of Kane and Kendall, and north part of Will County, compiled by James H. Reese, Land Agent, Chicago, Ill., 1851." The map shows Cache Island to be located on the township line between Townships 36 and 37 North, Range 10, east of the third P. M. in Will County, Illinois, between the Towns of DuPage and 4739 Lockport. Cache Island is in the Desplaines river on the township line.

4740 Leaving sinuosities out of account and making such calculation as I am able on the assumption that the Desplaines ran in a straight line, I would make it about 12 miles from the point where the portage reached the Desplaines river to Cache Island. Would add in this connection that La Salle says the Desplaines is a crooked river. The basis for my statement, that St. Cosme's party deliberately planned to go by the Root and Fox river route, thinking they would shorten their way to the Mississippi, is as follows: Pages 50 and 51 of the volume in which the letter appears shows that they left Milwaukee on October 10th; the narrative shows that some Indians had led them to suppose they might ascend by the Kipikawi river (reading):

4741 "Some Indians had led us to suppose that we might ascend by this river, and that after making a portage of about nine leagues, we could descend by another river called Pistrui, which empties into the river of the Illinois about twenty-five or thirty leagues from Chikagu."

There is a foot note, No. 16, which refers to the Root river as being the one which empties into the lake at Racine. Continuing the narrative (reading):

"We avoided this river, which is about twenty leagues in length, up to the portage. It passes through quite pleasant prairies, but as there was no water in it we judged sagely too that there would not be in the Bestikwi."

The WITNESS (continuing). Foot note 17 refers to the Fox or Pistakee river (reading):

4742 "And that instead of shortening our way, we should have had to make nearly forty leagues of the way as a portage. This obliged us to take the route of Chicagu, which is about twenty-five leagues from it."

I should say the whole passage in a general way shows that they deliberately planned to take that route. Perhaps one might so consider if he preferred. They considered it in the light of shortening their way as compared with the other route. They rejected it because they found the river dry and inferred therefore, that the other would be, necessitating a forty league portage, as they believed. Am not certain they considered it because they had been led to suppose it would shorten their route between the lakes and the

Illinois. They apparently rejected it, because they believed it would necessitate a forty league portage which

4743 I presume they did not expect to encounter on the Desplaines, so they evidently concluded the Desplaines would be easier than the one they thought they would have to make with the forty league portage in view, not nine leagues. I point out that this sentence, "This obliged us to take the route of Chicagu," seems to have considerable significance. Evidently, they preferred to go the other way, but for the belief that the 40 league portage was necessary. That is, they would have gone the other way if the condition had been one necessitating a 9 league portage only.

4744 As it was in the actual passage of the Desplaines, they portaged about 15 leagues. The 15 leagues was in LaSource's general statement. 10 or 11 was arrived at by striking off the three across the portage, was it not?

Q. Oh, no, that included the three. It was eight without that.

A. I think that was the nature of the computation from St. Cosme's account.

Chronologically, the next authority as to difficulties would be Charlevoix. His letters of September 14 and 17, 1721; I believe he wrote these letters on the St. Joseph; I believe he was coming down from Canada or Mackinac on the trip in the direction of the Mississippi.

4746 The letter dated the 21st of July, 1721, is headed on Lake Michigan, begins "I started from Mackinac." He is evidently on the way from Mackinac to St. Joseph. The next letter is dated River St. Joseph, August 16th, 1721, so sometime between July 21st and August 16th, 1721, he arrived at St. Joseph river. I believe he then started out in the lake and put back in to the St. Joseph, having intended

to go to Louisiana, going to coast the south side of Lake
4747 Michigan on way to region of Chicago, though not di-
rectly stated here. He says he put out 3 days ago, which
would be that long before September 14th. These letters in
which he mentions the Desplaines river were dated on Sep-
tember 14th and 17th, respectively. So far as the account
goes, Charlevoix had never been in Chicago, nor I pre-
4748 sume on the Desplaines. I suppose his statement that the
Desplaines was a mere brook was based on information
gained from some sources. So far as I am aware, not based
on personal observation.

As to whether I would regard his statement as more than
suggestive, I should say: I would regard that as a statement
of what Charlevoix believed to be the nature of the geography
of this particular portion of Illinois and the river which he
was referring to.

As to whether as a historian reading that statement I would
take it as anything but suggestive, I would ask if counsel
means would I say that settles the matter, would I suppose
that that established the facts.

Whereupon counsel made the following statement:

That has been the distinction as nearly as I can make it
out. Some statements you would accept as true, take them
at their face value; others, as near as I can make out, you his-
torians say are suggestive, and you have to go through and
check them up with other facts and make critical studies of
the works and find out the standing of the authors and so on,
and then determine whether or not they are to be given cre-
dence as a result of all this study. Now, I want to know how
you treat that statement of Charlevoix's.

Whereupon the witness replied:

Without assuming to enlighten counsel but simply to make
myself clear in the record, I will say that any statement by
any historian and the work of every historian is prop-
4749 erly subject to critical examination; and that in case
anything that any historian whatever has said is called
into question, or there is any reason for calling it in question,
it is properly subject to investigation and confirmation.

Or of being overthrown, whatever the result of the investi-
gation may be. I would say further, however, that just as in
ordinary life, we will for practical purposes accept the state-
ment of one individual as true and decline to accept the state-
ment of another individual as true, depending upon the

reputation of the individual involved. However, in ordinary life, if a statement of an individual, however high his reputation is, is put in question, it is fair and proper to criticise and undertake to determine the validity of the statement under consideration.

As to accepting some historians without criticism and declining to accept others without criticism, then, that is the only point involved in my mind. If a man like Justin Winsor makes a statement and a man like Mr. Drown makes a statement, and I am speaking of historical statements, one would naturally accept Mr. Winsor's statement with more confidence than he would that of Mr. Drown because of the higher historical standing of Mr. Winsor as compared with Mr. Drown,

But I know of no historian who holds that the works of
4750 any writer whatever are sacred and not subject to criticism. As a matter of fact, historians every day and commonly in their work do subject the statements of the writings of other historians, however high the reputation of the man may be, to examination and criticism. That in a general way is what I have in mind in making the distinction so far as I have made it, that counsel calls attention to.

Whereupon counsel for the Government made the following statement:

Q. But my point is this; you have said that looking to the means of information perhaps you would take certain statements made by men like Charlevoix as to matters within their personal observation to be true, in the absence of any evidence to the contrary. You have said that other statements not based on their personal observation you would regard as suggestive merely, if I gathered your distinction right. Now, I want to know in which class you put that statement of Charlevoix?

A. In answering the question I think it will be proper and desirable to say something further by way of explanation along the line I was talking of a moment ago. As a matter of practical necessity one must accept tentatively at least the statement or statements of writers and speakers as valid. One would never get anywhere in his work whatever if he must personally verify every fact or detail which came
into his hands and statements of writers whose works he
4751 was using. He therefore is of necessity forced to accept statements tentatively at any rate as if they were valid and he would be likely to question or criticize those statements which pertain to the point or investigation which he has in

mind that he is interested in. Do not think have said, and if have, would here withdraw statement which counsel has attributed to me, that I would accept statements of Charlevoix as true. If counsel is referring to this particular statement, perhaps would have another explanation to make with reference to it. Whereupon counsel stated that he was referring to said statement, to which the witness replied as follows: I am not aware that there are many things in Charlevoix work, statements as to detail, that are not correct. Charlevoix went astray as other historians do, and probably more frequently than some other historians. I take it that what counsel is getting at is the reason why I attach any validity to this statement of his.

Q. No, my question is now, in which category would you put it? Do you consider it by putting it in the category of suggestive statements which must be verified before you accept them, or do you put it in the category of statement which will be accepted unless you find evidence to the contrary?

4752 A. I understand this statement was made because it was simply "in the air" and therefore was given as a matter of common knowledge which probably the writer did not stop to think about at all, or probably did not think would be questioned at all, that this river in a portion or part was a rivulet or brook, the word he used being "ruisleau."

Therefore that it is unconscious evidence as to the information which Charlevoix has gained, and that apparently was afloat over at the other side of the lake, as to the character of the Desplaines river.

As to which category of those two I put it in, would say any statement whatever that is open to question, or concerning which a question has been raised, would necessarily need to be examined, and one's decision upon its validity would of course depend upon the result of his investigation.

As to whether the mere fact that the statement is not based upon the writer's or explorer's own knowledge is not enough to require that it be put in the class of suggestive material. would depend, I would say, entirely on circumstances. I would not hold that if this were all we knew about the nature of the Desplaines river, if this was the only evidence we had, that this statement of Charlevoix would be enough to

4753 establish as a fact or as proof that the river was such as he has indicated here.

Q. Oh, no, but which class would you put it in, to begin

with? You have made the distinction and I want to know which class now you would put it in.

Objected to, because it assumes that the witness has made a classification which he has not made as I understand the evidence.

COUNSEL FOR DEFENDANT. Is that correct, Dr. Quaife?

A. I am a little up in the air just at this point; I am not quite sure as to the classes counsel is asking about, and what I have said, or what he thinks I have said about them.

Q. Did you not make first of all this broad classification between historical sources or sources of historical knowledge, or perhaps it is not first of all,—but did you not make this classification between the sources on the one hand which you would accept, unless you found evidence to the contrary; and on the other hand, sources which you would regard as merely suggestive and wait corroborated by other evidence before you would accept them?

A. I would like to have the reference to the record if counsel will give it.

Q. I have not got any reference; I merely ask if that is not one of your principles.

4754 A. You do not mean to ask, then, whether I made that statement of it?

Q. No, I do not mean to ask you whether you made that statement, but I caught that general impression from your evidence. You have said several times that you would regard material as suggestive; that is what I mean.

A. The whole point I have in mind in that connection is simply this, and I tried to state it a few minutes ago, but evidently failed to give a lucid explanation. The historian deals with his sources in somewhat the same way that in ordinary life we deal with individuals around us. If in ordinary life the person who is notoriously unreliable or evidently unreliable, makes a statement to us, we hold a somewhat different attitude with reference to its validity than the attitude which we hold with reference to the validity of the statement, such a man like Mr. Gunsaulus, or Graham Taylor, for example, might make. That is about the only distinction that I would make in connection with this historical work. If a man or a source, and of course there is always a man back of a source, seems, in general to be worthy of credence, and if there is no evident reason for doubting or questioning the statement or statements he makes, one would be inclined to accept it tentatively at least. If the reverse is true, he would be inclined

to view it with more suspicion and to simply hold it as suggestive until he had confirmed or repudiated it.

4755 I believe a distinction is made between authorities on the ground that the matter with which the authority deals is within the personal knowledge of the writer, and as to matters which are not within the personal knowledge of the writer. I believe such a distinction is commonly made by historians, and I make such a distinction.

4756 Having that classification in mind or that basis of classification, as to whether I would put this statement of Charlevoix's in the class of material which requires verification before being accepted, or would put it in the class of material which is to be accepted unless it is found to be untrue, would say those are counsel's classifications, I believe. I have undertaken to make clear the classification I would make; it is rather an attitude of mind than classification; I think the record will show that clearly.

As to whether I said yesterday that there were certain statements of La Salle which I went over and which I would accept unless they were shown by some other evidence to be erroneous, and that there were others which I would regard as suggestive merely, and as to whether the same distinction applies to Charlevoix, and if so how I would apply it to this passage, I would say, I would not make any distinction between Charlevoix and La Salle in this respect. Then it is a fact that there would be some of Charlevoix's statements which I would accept in the first instance unless they were proven erroneous or inaccurate by other evidence; and
4757 others of his statements which I would regard as suggestive merely until I had verified them.

In what category this statement falls depends upon what importance is being attached to the statement, or whether it is being called in question or not. I have said if the statement was called into account, no matter who makes it, unless it is self-evident, it is a fair subject of verification. Supposing I was writing a history to which this passage became pertinent, as to whether I would accept that statement and work on the theory that that statement was true unless I found evidence to the contrary, or work on the theory that it was suggestive merely and would require verification,
4758 would say the careful historian always works on the theory that things are not true unless they are established. That is to say, his habitual attitude is one of doubt and demanding proof rather than as some of our so-called historians

seem to regard this matter, one of accepting statements as true unless they are called in question. I believe counsel assumed that this would be a pertinent and important point in my history. I would certainly undertake to confirm it or to criticise it, I will say, that is, I would treat it as requiring verification before I adopted it. If I saw any reason whatever to question it, or it seemed vital to my argument to establish it, I certainly would consider that it was proper to undertake to verify it or disprove it. If I had no other information; suppose this was the first authority I had run across in my investigation of the subject, I think the expert of the United States put this matter pretty well in his treatment of this whole subject; he called attention to the fact that a dispute had arisen between Joliet on the one hand and La Salle
4759 on the other, as to the nature of this water route, and he further pointed out, and I do not pretend to be quoting, of course, that this dispute could be settled or at any rate that the proper way to settle it would be to adduce further evidence. That argument seems an excellent one to me and I myself adopted it in my treatment of this whole subject.

Now, counsel is assuming that Charlevoix is put in the place where Joliet and La Salle have been put in fact, in the course of this investigation. I would say quite certainly it would require examination and verification. There would be no question whatever in my mind, that is to say, I see no question in this particular case; it is conceivable there might be a question,—that this is a bit of unconscious testimony that is given simply in a matter of fact way without any particular consideration, the same as one might say the sun rises in the east. That statement of course is not literally correct, and yet I suppose it is repeated every day and no one takes the trouble to dispute it or find occasion to dispute it.

Take such a statement as Flagg's that he had seen boats at St. Louis which had come down over the portage. As to whether I do not doubt that Mr. Flagg saw a boat at St. Louis and satisfied himself that it had come down over the portage, I would say that to my mind there is quite a distinction between the case of Flagg and that of Father Charlevoix.
4760 I understand that Charlevoix was about right; Flagg was recording an impression that to a considerable extent at least, was erroneous. As not aware that Flagg was writing a journal of his travels just as Charlevoix was. It is my impression he was simply copying some printed description such as we have in Morse, although he may have been

merely repeating current verbal information. I have no objection to assuming that Flagg's letter was addressed to him by someone, we do not know just whom, and published 50 years later in a newspaper. Not having the book before 4761 me, I think the statement to the same effect of Flint was not in a journal of his travels, of about the same character as Charlevoix. The title page of his book reads: "Recollections of the Last Ten Years, Passed in Occasional Residences, and Journeyings in the Valley of the Mississippi" and so forth.

Charlevoix was giving the journal of a voyage made by order of the King in North America, addressed to "Madame la Duchesse" and so forth. In that journal he was describing his travels on that particular trip he made in North America.

4762 Flint described occasional residences and journeyings in the valley of the Mississippi in the last 10 years. I go on with the title: "From Pittsburg and the Missouri to the Gulf of Mexico, and from Florida, to the Spanish Frontier. In a series of letters to the Rev. James Flint, of Salem, Massachusetts."

Charlevoix was making a definite tour. Flint is giving us more or less occasional recollections of occasional journeys.

I do not say Charlevoix' statement was not open to suspicion. I believe counsel had me establish or led me to establish the assumption that it was properly open to suspicion and confirmation or rejection.

4763 Q. Then you would put Charlevoix's statement and Flint's statement both in the class of statements requiring verification, would you?

A. As I said before, all statements which may be called in question are properly subject to investigation and verification or rejection as the case may be.

4764 At transcript page 3710 (Abst., 1406), I said, "one could hardly expect to find stronger historical evidence of the non-navigability of the Desplaines, or at least a part of it, and so on."

Q. You regard that statement of Charlevoix's in and of itself without verification or corroboration from other sources, as evidence of the sort described in your answer, on transcript, page 3710?

A. Those writers who have undertaken in the Narrative and Critical History, to give us a critical estimate of Charlevoix's work, have given it a very high estimate. They pointed

out, I showed in reading this estimate into the record on my direct, that he is liable to error in certain respects and therefore the historian who uses his work should be put on his guard in those respects. Cannot see any possible motive for Charlevoix's misrepresenting the condition of the Desplaines in this letter to the Duchesse, therefore I say that this is a bit of unconscious testimony, as I believe McLaughlin has described it, and McLaughlin would have us think, and I agree with him, that such evidence is to be regarded as of value and worthy of consideration. Of course there may be other things that appear in the document to render such evidence invalid, or to lay it open to suspicion; but am aware of nothing except what counsel has pointed out, and I think I need not dwell on that, to render this statement of Charlevoix's open to suspicion. Do not care to lead anyone to think I regard a single statement such as this as establishing such a proposition, in view especially of the fact that this is in this case a vital proposition.

4766 I conceive no motive for Charlevoix misstating his belief, or improperly describing this particular geographical condition as he understood it.

That statement of mine at transcript, page 3710 (Abst., 1406), is probably not literally valid. I can conceive of stronger historical evidence than this on examination of the statement. Am willing to amend it in this form: That I would regard this as very strong historical
4767 cal evidence as to the character of this river, the reason being that Charlevoix only 100 miles or so away from here and intending to pass down through this country to Louisiana, and presumably having made inquiry as to the nature of the route, and I suppose it is a fair presumption that the individuals over there at the mouth of the St. Joseph had some knowledge or conception of the nature of this route, states quite casually as though it were not open to question in any way, that the river is a mere brook in this place. It seems to me that is evidence that is well worthy of consideration in connection with this subject.

Q. Then one of the historical principles which you accept is that where a statement is made by a man of good standing concerning matters which he has had the opportunity to learn about from others whose opportunities themselves to know it were very good, and when no motive appears for his distorting the fact, it is very strong evidence of the truth of the fact stated, even though the work itself may contain some

inaccuracies which I understand you have stated Charlevoix's work contains?

A. May I ask counsel a question?

Q. Yes.

A. Is there such a thing or are there such things
4768 as principles in the legal realm?

Q. Very many of them, I think we can agree on that, can we not, Mr. Scott?

A. And those principles, I suppose, are capable of statement?

Q. I presume they are. I do not say that I can state them, however?

A. Then will counsel explain why the layman need engage a lawyer?

Q. Because the lawyer has usually studied those principles and if he cannot state them offhand he can usually look them up and find out what they are and can then apply those principles to the facts of the case stated by the layman.

A. Would I be far astray in supposing that at least an important part of the lawyer's function pertains to the application of the principles to specific cases?

Q. I think not.

A. I am inclined to think that is a parallel case to that of the historian.

Q. But you have not stated whether there is such a principle.

A. I am not certain whether there is or not in the way counsel has stated it.

4769 Every individual case must be examined and tested on its merits, in view of all of the factors that are available that seem to have any bearing on the individual case.

As to what is the general principle on which I work, I would say, that if counsel wants to exclude these other considerations, I am not sure that I have any objection to the principle counsel has stated, but when it comes to the application of any general principle there are many things to take into account and in each specific case these things will differ more or less doubtless from every other specific case.

As to whether that is a fair statement of the general principle, I would say, excluding as I said, all other considerations, I do not see at this moment any particular reason to object to it.

As to whether I can state the general principle upon

4770 which I work, I would say: I would not state any general principle myself except this, that the historian ought to take into consideration every fact or every source which has any bearing upon the proposition he is examining, assuming that those things are available, of course. He cannot consider what he has not available. Only those things which counsel has stated to be available.

As to how I would regard this material, I would say, I presume counsel is aware of the fact that the work of the historian in seeking to establish a proposition or to negative a proposition as the case may be, in connection with some event in the past, is frequently, if not usually exceedingly difficult, and is oftentimes absolutely impossible of consummation for the reason that he has not available and cannot procure the information that is necessary to the carrying out of his enterprise. In the application of what counsel has suggested as a general principle to any specific case whatever, there would be things to be considered which can only be considered when such a principle comes to be applied to a specific case. One would have to consider the character of the informants and the probable means of knowledge of the informants.

4771 Consider whether the thing squares with his common sense and whether it seems to tally with what other knowledge he may have of this particular subject. All such things I should say the historian would have to take into account at every step of his work. I do not mean to say that he is always conscious of all these various influences and processes; doubtless the experienced historian carries them on sub-consciously to a very considerable extent.

As to what was the character of Charlevoix's informants, and who they were, I would say that I said that Charlevoix was coming down to Louisiana by way of the fort on the St. Joseph, and since he intended to go farther on he would naturally, it seems to me, inquire about the routes. It appears further that he knew there was a choice of possible routes to take to get from the fort on the St. Joseph to the lower Illinois, and he would make this inquiry doubtless of whomsoever seemed to him competent to supply the information.

I would presume that there may have been at the St. Joseph at this time individuals who had some idea of the nature of the Desplaines river or the upper Illinois, as I believe he
4772 would have called it, and if not at St. Joseph, at somewhere in the course of his travels westward either at

Mackinac or elsewhere, he could and doubtless did procure information on this subject.

As to whether I really have no accurate knowledge at all as to where he got his information, I would say certainly not.

Q. And in that respect the case is just like Flagg's and Flint's is it not?

Question objected to as argumentative.

A. I would add to that answer by saying certainly not, I do not mean to withdraw my preceding statements as to what the character of the information and of those informants probably was. I would not care to say that the case is exactly like that of Flagg and Flint.

Mr. CORNEAU. Q. One possible ground of distinction between Charlevoix's source of information is that Flagg and Flint may have obtained theirs from people who actually went over the route, who came down in the boats, is it not?

Objected to as not being a question and as being an assertion of counsel.

A. In reference to Flagg, I would say that until the witness of the United States or counsel have gotten around to giving us more means of judging about him I would not 4773 care to add anything to my opinion or estimate which I gave the other day.

As to Flint I would say it is entirely possible that he got his information from men who came down in boats. I do not see and do not think that there is any reason for making a distinction between Flint and Charlevoix in that respect. Charlevoix's information may well have come from men who may have been over here on this side of the lake and seen the Desplaines river.

Q. Do you consider that Flint had the opportunity to get his information from me quite as well informed as those from whom Charlevoix may have gotten his information?

Objected to on the ground that it does not appear that there is any conflict between Charlevoix and Flint upon any question.

COUNSEL FOR GOVERNMENT. He said in effect that he did not see that the cases were parallel.

After colloquy between counsel, witness continued:

As to whether I regard the two cases of Flint and Charlevoix as parallel in respect to the opportunities of ob-

taining accurate information, I would say, no, not in all
4774 respects. As to what difference there is, I have pointed
out that Charlevoix was on his way down to Louisiana
and therefore shown the reason why he would be interested
in establishing the character of this route. I am not aware
that Flint was ever on his way to Chicago, or that he ever
had any intention of coming to Chicago. There is one ma-
terial difference, it seems to me.

COUNSEL FOR GOVERNMENT. That has no bearing on the re-
liability of the men to whom he may have gone for informa-
tion has it? That would bear upon the extent of search he
may have made for information.

The WITNESS. I thought counsel asked me to point out
wherein these cases were not entirely parallel.

Q. I said in respect of the knowledge of the persons from
whom they might have obtained their information.

The WITNESS. I do not think the two cases were en-
4775 tirely parallel. I find this difference, that if I am plan-
ning to take a journey into a region which I have not
traversed hitherto, I will be likely to seek information with
more diligence and care than though I have no thought of
ever making such a journey. In one case I would be less likely
to accept ordinary hearsay evidence, or less likely to take the
statement of the casual or uninformed or ill-informed witness
than I would in the other case. If in fact, these boats did in
fact come down from Lake Michigan and into and down the
Desplaines and the Illinois without making a portage, as to
whether the men on the boats would be about the best means
actually to know that, I should say that such an individual
ought to know whether the boat had made the passage
or not.

4776 Q. Those men who may have come down in the boats,
made the passage in the boats, if the boats did come
down, would be quite as reliable informants as any Charle-
voix would have been apt to have found on his trip, would
they not? I mean, so far as their opportunity of knowing the
facts are concerned.

Mr. SCOTT. Objected to as not requiring any expert opin-
ion.

A. The only statement of Flint that is under discussion
here is to the effect that he had seen a Mackinaw skiff carry-
ing five tons which had come from the lakes to the waters of
the Illinois without a portage. I said a while ago, and it

seems to me I answered the question in stating it, that a man who was on a boat when it was making such a trip, assuming of course that he was in his right mind and took the ordinary care to observe what was going on, ought to be a competent witness as to whether such passage was made or not. I 4777 should think that answers the question.

As to whether counsel for the government understood me correctly to put Charlevoix in the class of those who attempted to use the Desplaines and failed, I would say I know of no time when Charlevoix ever actually attempted to use the Desplaines. Joutel's account of the failure of the men from Montreal would go in the statement of Joutel which I was making this morning, that is, I would put in whatever pertains to Joutel in that connection.

As to what was the purpose of Kennedy's trip up the Illinois, I would say, that the opening statement of the Journal is that they were looking for a copper mine.

4778 He apparently thought it was near the head waters of the Illinois. The title is "Mr. Patrick Kennedy's Journal of an Expedition undertaken by himself and several coureurs de bois in the year 1773,—from Kaskaskias village in the Illinois Country to the Head Waters of the Illinois river." Under entry for August 15th, page 62 is:

"Rowed very constantly all day and arrived at the Mine River in the evening. Here I met with Mr. Janiste, a French gentleman, and prevailed on him to accompany me in an attempt up this River to discover the Copper Mine."

Mine river is somewhat farther over to the west and empties into the Illinois on the north, I believe. I believe it is west or below the junction of the Kankakee and the Des- 4779 plaines. Kennedy evidently had another mine in mind when he set out on this expedition than the one to which the entry of August 15th refers, because it was long before this that he had gone up the Illinois above the Mine river; 4780 possibly he was still searching for the same mine that he had not yet found. Do not know how much knowledge he had of this region in advance of his expedition.

As to how far up he went on the Illinois river, I would say, I judge he came to a point a mile above the Vermillion river, he says that is about 60 miles from the junction of the Desplaines and Kankakee. As to what he did next, I would say he proceeded by land to the forks.

Q. Did he reach the forks? I ask that because I think you will find he started for the forks and met some traders and stopped there.

A. He came to a place 15 miles from the forks and then from there he went on to an island. It does not appear where the island was. There is nothing to indicate how much farther, if any, they may have gone up the river.

As to whether it is a fair construction that proceeding on land up to about that point he went out to an island which he there found and where these traders were, I would say that I would suppose the island was in that vicinity, and it seems that there he met the traders.

As to what he says about that meeting, I would reply that he said he could get no intelligence about the copper mine
4781 so he hired a French hunter to take him in a canoe to his boat. That is evidently to take him back down stream. I presume they went in a canoe. I would judge that although he abandoned his boat at a point where there was about 3 feet of water on his trip some distance below this point he returned in a canoe. Assuming that the island is below the Desplaines, he never saw the Desplaines. He attempted to go to the head waters of the Illinois; failed to get there; failed to get to the Desplaines, therefore did no physical violence to the Desplaines.

4782 It would seem not unreasonable to say that he attempted to use the Desplaines on this expedition.

4783 I presume one reason why he turned back at the point he mentioned is that these traders could give him no intelligence about the mine. However, it appears he left his boat on the Illinois, started off up by land still looking for the mine. We might infer other reasons why he turned back than his conversation with the traders. Might have gotten tired of further travel by land. If he had gone 45 miles from his boat, and could not get intelligence of the location of the mines, he may have thought he did not care to travel any further in search of it. If he had had his boat and had been able to travel in it, he may very well have gone on without regard to the information which the Frenchman gave him.

4784 I believe Heward will be the next authority in order. He leaves the difficulties he had largely to imagination or inference. He procured a pirogue at Chicago or DuSable, having gotten across the carrying place on a rainy day in the early part of May, set out down the Desplaines, passed on

until reached a camping place; was informed by one of his men that there was so much danger that he need not be surprised if he should not return with him. It is not certain that the danger was encountered on the Desplaines, although I would call attention to the experience of the Joutel party, and to the fact that in the English translation of the Journal, it is pointed out that this was a dangerous passage and required expert canoemen and so forth. The danger indicated in that case is due to falls. I believe Stiles Edition puts it as due to great falls in the river. I suppose whatever they are, they are dangers incident to passage of river. He says that the carrying place at Chicago was a half a mile; it does not appear whether that was the only portage he made on the river. That was the portage between the rivers. He says "got over nearly at midday. From thence passed in the run and small lake to the River De Plain, and course turning nearly southwest." I presume that indicates he went through Mud Lake and down the run and into the water without making any portage, except the half mile statement.

4786 I believe there was no further portage after the half-mile portage. At least it does not appear by the narrative at this point. With reference to what the dangers may have been, might point out that immediately before the statement from Morrae that he would not return on account of the dangers, appears the statement that they passed a long rapid and came to Mount Joliet. Whether the danger pertained to the long rapid or not, is a suggestion I make at this point.

Several authorities come up about the same time after Heward.

Hubbard, Schoolcraft, Graham and Philips.

4788 Pursuant to counsel's request, I read the opening sentence of Kennedy's journal, in the portion wherein he speaks of going to the island, meeting the traders and hiring the canoe and coming back. Reading from Hutchins' Topographical Description, page 51, July 23, 1773:

"We set out from Kaskaskias in search of a Copper mine, and on the 31st reached the Illinois river;—it is 84 miles from Kaskaskias."

August 10th. (Reading):

"From hence we went to an island, where several French traders were encamp'd but we could get no intelligence from them about the Copper mine which we

had set out in search of. At this island we hired one of the French hunters to conduct us in a canoe to our boat.

4789 August 11, we set off about three o'clock, and at night got within nine miles of our boat. We computed it to be 45 miles from the island we last departed from, to the place where we left our boat."

I desire to correct two errors in detail in my recent testimony. On transcript page 4639 (Abst., 1719) in speaking of LaSalle's movements, I said he went from the St. Joseph by way of the Kankakee on his trip down to the mouth of the Mississippi. The fact is, as I have stated it elsewhere in the record, that on that expedition he merely tarried behind Tonty for a time at St. Joseph and then followed him and came by way of the Chicago portage and spent same days here at Chicago in January, 1682.

As to whether I mean Tonty and LaSalle both went by way of the Chicago route or that Tonty went by way of the Kankakee and LaSalle by way of the Chicago route, I would 4790 say, one party started out ahead from the fort on the Miami river and came by way of Chicago; LaSalle stayed behind to make caches for his goods, I believe. Then LaSalle came on and caught up with the party at Chicago and himself spent several days here, and then all went on down together.

At transcript page 4734 (Abst., 1750), I said that St. Cosme's party reckoned on a seven league portage by way of Root and Fox rivers. I have said elsewhere, and it appears in the book, that they reckoned on a nine league portage rather than a seven league portage.

As to whether Schoolcraft at several points in his journey through the country in 1821 left the water and 4791 proceeded overland and before he reached the Illinois river at all, as appears at page 68 in the Personal Memoirs of Thirty Years' Residence with Indian Tribes, I would say it appears at p. 68 that in company with Cass, Schoolcraft left Detroit early in July and then went down the Detroit river to the site of the present city of To- 4792ledo, and through (I do not give all the details) the Miami valley to the site of Wayne's victory of 1793 and on to Ft. Wayne, and made a horseback expedition evidently in the course of their journey, leaving the Canadians to take care of the canoe; passed on until they reached Shawneetown. Canadians were sent with the canoe around by

water to St. Louis, down the Ohio and up the Mississippi, while Cass and Schoolcraft procured a stage wagon to cross the prairies. Page 68 (reading):

"On reaching St. Louis, General Cass rode over the country to see the Missouri, while I, in a sulky, revisited the mines in Washington, and brought back a supply of its rich minerals. We proceeded in our canoe up the River Illinois to the rapids."

4793 Schoolcraft was interested in geology. It appears he visited the locality of fluor spar in Pope County, furnishing one instance of geological observation (reading, p. 68):

"We proceeded in our canoe up the River Illinois to the rapids, at what is called Fort Rock, or Starved Rock, and from thence, finding the water low, rode on horseback to Chicago, horses having been sent, for this purpose, from Chicago to meet us."

Pursuant to request of Counsel, witness then read from Schoolcraft's *Travels in the Central Portions of the Mississippi Valley*, page 321:

"Finding the navigation so difficult, we determined to relinquish the design of proceeding any farther by water, and to await the arrival of horses from Chicago, which had been ordered to meet us near this place on the 10th. A man was sent by land to Reddick's Deposit. He returned at a seasonable hour on the following day, having found horses in waiting. Having made the necessary arrangements for conveying baggage by land, and leaving our canoe men in charge, we mounted our horses at ten o'clock in the morning and pursued the journey with renovated spirits."

4794 With reference to Schoolcraft's interest in geology, I notice on page 68 of *Personal Memoirs*, that he searched for and found the fossil tree reported to lie in the rocks in the bed of the Desplaines. So it appears that he was interested in that particular geological feature.

As to where the place "Reddick's Deposit" referred to in the above passage is, I would say I do not know, I have never undertaken to verify that.

As to whether it was apparently near to Starved Rock and for the purpose of answering the witness' attention was directed to the statement in the *Personal Memoirs* where he said he proceeded in the canoe up the Illinois river to the rapids at what is called Fort Rock or Starved

4795

Rock, and then follows the statement referred to. Whereupon the witness replied, that it was apparently between Starved Rock and Chicago, but that he did not see that the things that counsel called his attention to threw any further light upon it.

The WITNESS (continuing): He makes the statement that Schoolcraft's party sent a man to Reddick's Deposit to meet the horses and he returned the next day with them. It does not appear when the man was sent. It does not appear that he returned on the following day, having found the horses in waiting. If he returned on the following day, it would be a fair inference that he meant that he returned on the day after he was sent, and that it would be a fair inference from the passage that it was expected that the horses would be there at Reddick's Deposit either waiting for him or to meet him, would seem probable. He states that the horses had been ordered to meet us near this place on the 10th, and 4796 that a man was sent to Reddick's Deposit by land and he returned at a seasonable hour on the following day, having found the horses in waiting.

Whereupon, counsel for the government directed the witness to turn to the passage in either the Memoirs or Travels, in which Schoolcraft described the conditions on the Illinois River at or near the point where he left it.

Whereupon counsel read the following from the Memoirs, page 68:

4797 "We proceeded in our canoe up the River Illinois to the Rapids, at what is called Fort Rock, or Starved Rock, and from thence, finding the water low, rode on horseback to Chicago, horses having been sent, for this purpose, from Chicago, to meet us. There was not a house from Peoria to John Craft's four miles from Chicago."

The WITNESS (continuing): Another place where he speaks of conditions on the Illinois in Travels in the Central Portions of the Mississippi, page 318 (reading):

"At two o'clock we reached the mouth of the Vermillion, a fine, clear stream, entering on the left bank. This point is estimated to be equi-distant between Chicago and Fort Clark, it being ninety miles either way. The rapids commence half a mile above, which makes it evident that the Illinois is greatly diminished in size above the junction of the Vermillion. The water at once becomes shallow, and the rock, which is sandstone, pre-

sents itself first in broken masses, and soon after flooring the bed of the river. When our canoe would no longer float without rubbing against the rocks, we got out and made a short portage, the empty canoe being still guided along by men walking in the stream on each side. When we again embarked, we could, however, go but a very short distance. Another portage was necessary.

In short, we could no longer proceed in our water craft. Nothing but a series of rapids appeared above as far as we could explore. The water was scarcely eight or ten inches deep in any place, and often less than four. With great exertions, we had proceeded two or three miles above the Vermillion, and about 4 o'clock we encamped near a remarkable isolated hill, called by French voyageurs *Le Rocher*, and *Rock Fort*."

Then occurs the passage (reading):

"Finding the navigation so difficult, we determined to relinquish the design of proceeding any farther by water," and so forth.

Whereupon, the witness read pursuant to request from the same volume, page 328 (reading):

4799 "This rock is a species of recent sand stone, not essentially different from that which pervades a considerable area near the sources of the Illinois. The depth of water upon the rock was commonly little more than twelve inches."

Here occurs a footnote reference to Thomas Tousey.

Witness then read from page 332, same volume, the paragraph beginning with the figure 14 (reading):

"About ten o'clock in the morning, we reached the ford of the Desplaines. We found the river about thirty yards wide, and the depth of water two feet."

I read the footnote on page 328 (reading):

"Thomas Tousey, Esq., of Virginia, who visited this locality in the autumn of 1822, found nearly the same depth of water in the Desplaines. He writes:—'With your memoir in my hand, we rode up and down the river, till the pursuit was abandoned by the others; while my own anxiety and zeal did not yield until it was discovered. The detached pieces we found covered with twelve to about twenty inches of water, and each

of us broke from them as much as we could well bring away.' ”

That is a citation from Tousey's letter printed in full in Schoolcraft's Memoirs, which has already been put into the record, and shows that this is a time when recent rains had raised the river to an uncommon height. Reading from page 180 of Schoolcraft's Personal Memoirs (reading):

“I, with my two companions, found your fossil tree, in the Desplaines, with considerable labor and difficulty. This I anticipated, from the commonly reputed opinion of the uncommon height of the waters.”

The WITNESS (continuing): It does not appear what raised the waters to an uncommon height.

My attention is directed to a Summary Narrative of an exploratory expedition to the sources of the Mississippi in 1820, by Schoolcraft, published Philadelphia, Lippincott and Grambo & Company, 1855, page 398; appendix entitled: 4801 “A memoir on the Geographical Position of a Fossil Tree in the Series of the Secondary Rocks of the Illinois.” Reading from the appendix, page 396:

“At the time of my visit (August 13, 1821), the depth of water upon the floetz rocks forming the bed of the river Desplaines would vary from one to two feet; but it was at season when these higher tributaries, and the Illinois itself, are generally at their lowest stage.

Like most of the confluent rivers of the Mississippi and their tributaries, the Desplaines is subject to great fluctuations, and during its periodical floods may be estimated to carry a depth of eight or ten feet of water to the junction of the Kankakee.

At those periods, the water is also rendered turbid by the quantity of alluvial matter it carries down, and a search for this organic fossil must prove unsuccessful. But during the prevalence of the summer droughts, in an atmosphere of little humidity, when the waters are drained to the lowest point of depression and acquire the greatest degree of transparency, it forms a 4802 very conspicuous trait in the geology of the stream, and no person seeking the spot can fail to be directed to it.”

Schoolcraft wrote Cass September 17th, 1821, asking him for his account of the fossil tree in order that School- 4803 craft's observations might be backed up by Cass, and this extract which I proposed to counsel to read, School-

craft states is quoted from Cass' reply on that subject. Page 404 (reading):

"When we visited the spot, the water of the river was at the lowest stage; but there was no part of the tree within some inches of the surface. The rocky bed of the stream was formed round and upon it. We raised from it pieces of the rock, which were evidently in situ, and which had been formed on the tree posterior to the period of the deposit in its present situation. This rock is a species of sandstone, whose characteristic features must be well known to you."

The tree had evidently subsided into the bottom of the stream. That would throw some light on the matter of the depth of the stream at this point at this time. As to the diameter of the trees, I read from page 397 of Schoolcraft's

Mississippi (reading):

4804 "It lies in the bed of the Desplaines. The action of this stream has laid bare the trunk of the tree to the extent of fifty-one feet, six inches. The part at the point where it is over-laid in the western bank is two feet six inches in diameter. Its mineralization is complete. The trunk is simple, straight, scabrous, without branches, and has the usual taper observed in the living specimen. It lies nearly at right angles to the course of the river, pointing toward the southeast, and extends about half the width of the stream. Notwithstanding the continual abrasion to which it is exposed by the volume of passing water, it has suffered little apparent diminution, and is still firmly imbedded in the rock, with the exception of two or three places whose portions of it have been disengaged and carried away; but no portion of what remains is elevated more than a few inches above the surface of the rock."

Using the passage from Cass' letter, do not see how one could draw conclusion as to the depth at the petrified tree.

4805 It seems to me it would be a pertinent matter whether the tree, being two feet six inches in diameter, lay on the bed of the stream or was sunk into the bed of the stream, whether the top of the tree was even with the bed of the stream or two foot six inches above the bed of the stream as the case might be. I see nothing in that passage throwing any light on the question. It only throws light on the

general condition of the stream as adduced from these passages. Schoolcraft says on page 398 that, "The depth of water upon the floetz rocks forming the bed of the River Desplaines, would vary from one to two feet." Read other passage from Cass because it seemed it would help make it evident that the tree itself was not lying upon the bed of the stream and still under the water. Evidently the tree had sunk into the bed of the stream. Stating the basis of 4806 my conclusion at transcript 4167 (Abst., 1571), where I say of Schoolcraft's Journal of Travels in the central portion of the Mississippi Valley, "That he found it impossible to pass along the Desplaines in a canoe." He undertook to come in a canoe up the Illinois to Chicago, or his destination being Chicago. It appears they came as far as they could in a canoe in water, after making vain efforts to come farther, and concluded they could not, they took to horses. I believe from the account the point where they abandoned their boat was on the Illinois River. I suppose it a fair deduction that they had ordered horses to meet them somewhere near that point, apparently before that time.

Concerning the point where they abandoned the Illinois river, he says:

4807 "The water was scarcely eight or ten inches deep in any place, and often less than four."

As to whether he finds there from one to two feet of water at the mouth of the Desplaines, and further up at the Ford near Chicago, he found two feet of water and a width of thirty yards, I would say, he says he found from one to two feet of water, evidently at the point where the fossil tree was situated. I believe that was at or near the mouth.

Q. And up at the Ford he found two feet of water and the stream thirty yards wide, did he not?

Objection; requires no conclusion; statement speaks for itself; question is wholly argumentative.

A. I believe that is correct. I do not seem to have the reference at this moment.

As to whether I still wish to adhere to my opinion 4808 that he "found it impossible to pass along the Desplaines in a canoe," I would say, at the time I formed that conclusion it seemed a justifiable one, and counsel has shown me nothing as yet to lead me to change it. Therefore, I shall say until counsel enlightens me, I do.

As to whether it would be impossible to navigate a canoe in a stream containing from one to two feet of water, assum-

ing that other conditions were favorable, I would say, I presume the ordinary canoe could be navigated in such a stream. In giving my opinion, I did not assume that Schoolcraft had intended to use the Desplaines. As to whether when I 4809 gave that opinion I assumed when I gave it that Schoolcraft had intended to use the Desplaines, I understand from the narrative he would have used a canoe to Chicago had it been practicable. That they undertook to use the canoe as far as they could, and when they found they were stopped, they explored further and evidently persevered for some time in their efforts to continue the canoe navigation, and gave it up as impracticable, and sent for horses, and continued on horseback. They had ordered them before evidently.

4810 I would suppose from this, that they doubtless knew something about the character of the river navigation of the Desplaines and Illinois, and since the governor of the territory was in this party and they were going on business of state they did not intend to find themselves stranded down somewhere in the middle of the state because of lack of water in the river to continue their journey. Had there been water in the river, suppose they would have continued in canoe. Lacking that they had another means of transportation provided. Do not assume that when they went from Shawneetown to St. Louis by horseback they did so because they feared there was lack of water in the Ohio and Mississippi.

In the other instance it is evident that they were taking a short cut across the hypotenuse of a triangle so to speak, and that as an additional reason, or a reason at any rate, for doing this, they were exploring the country. I do not mean to use exploring in any technical sense; they were ob- 4811 serving the country. In this instance it is apparent they used the canoe as far as they could and they persevered for some time at least in further efforts to continue in the canoe, and only then did they send for the horses. It appears from the Journal that the one geological feature Schoolcraft was interested in in this portion of the trip was the tree in the bed of the Desplaines, and certainly that could be viewed from the canoe as well as from horseback.

In going from the point where they took the horses on the Illinois to Chicago by horseback, they would not have been able, to any appreciable extent, to cut across the hypotenuse of the triangle, barring the sinuosities of the stream.

4812 (Referring to map.) Shawneetown appears on the eastern side of Illinois on the Indiana boundary, evidently, about due southeast of St. Louis. It is below the junction of the Wabash and Ohio.

*Q. Turn to the appendix and see if it is not a fact that Schoolcraft had made a very considerable study of the geology of the Desplaines Valley, or did make it on that trip?

4813 COUNSEL FOR DEFENDANT. I object to requiring the witness on the stand to examine works for the purpose of ascertaining certain things which can be done by putting in the work itself, or by the testimony of somebody familiar with the particular parts of it that apply to the question.

COUNSEL FOR GOVERNMENT. I asked the question because the witness made an answer which tended to indicate that in his mind the horseback trip from the Illinois river to Chicago could not have been prompted by any desire to explore the country off the river, and I desire to ask the witness whether he cares to adhere to that opinion after he has looked at what the book says.

A. I would say that from such examination as I am able to make of the appendix in this brief survey that I do not see any evidence of what counsel asked for in the question.

It is my understanding that Schoolcraft did make observations on this trip, being the sort of man he
4814 was, with the scholarly interest which possessed him, he would not have gone through any region such as this without observing carefully whatever came to his attention. Would not say that because going through the region he took the trouble to make this observation as was his habit, that therefore he went through the region for the sole purpose of making observations. They began their horseback journey on the 11th, at least, that is my deduction from the statement that the horses had been ordered to meet them on the 10th, and that the man returned the following day, and that they mounted their horses and pursued their journey.

4815 The first camp for the night preceded the date of the 12th. The 13th then follows, the date they were at the fossilized tree and made their investigations. The 14th, at 10 A. M. they were at the Fort of the Desplaines. It
4816 seems probable from that they started on the 12th, rather than the 11th. Will say there is no direct statement apparently as to this matter but it must be deduced from the narrative. I say from that because the account of the en-

campment or the statement of their reaching the place of the encampment, is given, and is immediately followed by a couplet or verse, and then the entry for the 13th, with the account of the doings for that day.

Q. But you called attention a moment ago to the statement that they sent for their horses on the 10th and they arrived the following day and they started out at 10 o'clock in the morning.

Objected to, because he did not say they sent for their horses on the 10th. The statement was that they were ordered to meet them on the 10th; not that they sent the man on the 10th.

The WITNESS. I called attention a moment ago to that portion of the text and undertook to draw an inference from it; and then Mr. Scott called my attention to this other portion of the text, page 323, and I stated in view of that it 4817 would appear that they started the 12th rather than the 11th. I suppose the basis of that conclusion is now sufficiently stated in the record in the course of these questions and answers.

Q. Now let us get back to my question. What do you find in Schoolcraft's account in the way of statement that it would be impossible to use the Desplaines with a canoe?

A. I find the statements on pages 318 and 319 to the effect that they were forced to discontinue the use of the canoe because of the lack of water?

Q. On what river?

A. On the Illinois river.

Q. Now, you know that is not what I asked you about, don't you?

A. I am trying to answer counsel's question, if you will give me an opportunity to complete my answer.

Q. I will, but I would like you to try to answer it; I am asking you specifically as to what he says as to the Desplaines river.

(Question read.)

4818 A. I submit that is a different question than the one counsel has just stated.

Q. That is the question I asked you about the Desplaines river.

(Question reread.)

A. Now, may I answer the question?

Q. You may.

A. I will take up my answer now then, and say that I find

on pages 318 and 319 of this volume an account of their failure to proceed any further in their journey up the Illinois to Chicago because of the lack of water. That they made efforts to continue farther, but that they came to the conclusion that this was impossible.

COUNSEL FOR GOVERNMENT. Right there, before he goes any further, I move to strike out all that answer.

COUNSEL FOR DEFENDANT. Go right on.

A. And then it appears on page 321 of the same volume, that having found the navigation so difficult they determined to relinquish the design of proceeding any further by water; that is a quotation, and therefore it is evident that they had such design to proceed further by water.

Mr. CORNEAU. Q. That second statement does not refer to the Desplaines, does it?

A. I should like to complete my answer, if counsel will permit it.

4819 Mr. CORNEAU. Just a moment, I want to interpose a motion to strike out the answer.

Mr. SCOTT. Go on and complete your answer. He can make a motion to strike out any time he pleases, but you are entitled to complete your answer.

Mr. CORNEAU. I think not. I interpose my motion to strike out at that point that reference on the ground that as we all know it does not apply to the Desplaines river.

Mr. SCOTT. Proceed, Doctor.

A. Further, on page 332 of the volume just referred to, speaking of the Desplaines he says (reading):

"We have, however, seen its channel, as a sufficient number of points, to determine that it has several long and formidable rapids which completely intercept the navigation at this sultry season:—a remark that has been confirmed by meeting several traders on the plains, who had transported their goods and boats in carts from Chicago Creek, and who informed us, that they thought it practicable to enter the Illinois at Mount Joliet."

I submit that that is an answer to counsel's question, and my opinion as to what appears in Schoolcraft bearing upon the impossibility of using the Desplaines in a canoe at this time.

Mr. SCOTT. I would ask you in that connection to complete that quotation.

4820 Mr. CORNEAU. Just a moment, Mr. Scott. I object to counsel's coming in in preference to me on cross-exami-

nation. That passage refers to the difficulties of passing rapids at certain points, doesn't it?

A. That passage has just been put into the record, I believe.

As to whether I gather the inference from that that the rapids were dry I do not know as I would gather any inference from that unless I had more to base my inference upon; it might be true and it might not.

Q. Do you infer that it was impossible in Schoolcraft's judgment to use the Desplaines at other points than at these rapids?

A. I have not drawn any inference, I believe, but I will proceed to do so if counsel cares to have me.

Mr. SCOTT. Answer his question, "Do you?"

Mr. CORNEAU. You may.

A. I would suppose that the Ford of the Desplaines, where the water was two feet deep and the river thirty yards wide, this being a ford, evidently it was not a fall or a rapid, that a canoe might have been used at such a place. It is possible and perhaps probable that a canoe might have been used at a point near the fossil tree. I understand that this is a
4821 general summary on page 332 as to the character of the Desplaines, and I take that in connection with what seems to me is clearly evident from the narrative that they would have come on up the Desplaines in a canoe if it had been practicable, but that they came to the conclusion that it was not practicable to do so.

As to whether I assume in that answer that the only points at which they could have used the Desplaines, were at the ford and at the place near the petrified tree, I would say, I merely gave counsel the two illustrations that I had in mind of statements that occur in the narrative that seem to me to justify the assumption that the Desplaines could be used. If there are others, counsel will doubtless point them out to me.

Being asked if I wish to be understood that it is my opinion that Schoolcraft found it impossible to use the Desplaines for any considerable distance will ask counsel to indicate what he means by "any considerable distance"; that is about what distance he may have in mind. Leaving the question as it is I will interpret it to mean that you asked me if
4822 Schoolcraft found that there was any considerable distance of the Desplaines which would not be used in a canoe, I would say yes in answer to the question on that interpretation.

As to whether I wish to be understood that it is my opinion that Schoolcraft found it impossible to use the Desplaines in a canoe at other points than the rapids he speaks of in the passage I read a few moments ago, I would say, I have already said I thought he might use a canoe at the ford and at the fossil tree, and have said that I put into the record the two illustrations or cases or statements which I happened to have in mind at the moment. What I meant by the statement on my direct that Schoolcraft found it impossible to pass along the Desplaines in a canoe, I undertook to make it clear, I believe, on my direct examination on this point, that in my opinion Schoolcraft and the party to which he belonged, were coming up the Illinois river to Chicago, 4823 and would have come to Chicago, or up the Desplaines at any rate in a canoe if that had been practicable. That the narrative that has been left us of the expedition makes it perfectly plain that that was not practicable. Therefore they abandoned the canoe and therefore my statement that they found it impossible to pass along the Desplaines in a canoe.

As to whether it is a fact that they never tried to use a canoe on the Desplaines at all, I would say they tried it in the sense in which I have indicated, but should not say that refutes my answer I just gave. If I tried to go to the North Pole and did not get to the North Pole, it would not obviate the fact that I tried to go there. If the Desplaines had been totally dry, as counsel would have interpreted La Salle's statement earlier in the examination, certainly they would not have put the canoes in the Desplaines and yet they might have tried to use the Desplaines and failed for that reason. It seems it is a *reductio ad absurdum* argument that counsel is employing.

Motion to strike out the additional statements as not responsive.

4824 The WITNESS (continuing): This opinion is based on the whole narrative in so far as it is pertinent, and upon what other facts or knowledge I happen to have in mind that have a bearing on that narrative. Being asked upon what portion of the narrative I base my opinion that Schoolcraft would have used the Desplaines had it been practicable would say that on pages 318 and 319 of Schoolcraft's *Travels* occurs the account of that portion of this journey where they gave up the use of the Illinois river by canoe or in a canoe, it being apparent from this narrative that they

made efforts to continue the use of the river, and that
4825 they abandoned these efforts to use the Desplaines because of lack of water. I understand they were going to Chicago to take part in an Indian treaty or something of that sort.

4826 As to whether they were going to meet their horses which had been previously ordered to meet them at Reddick's Deposit, will say, I see no statement to that effect. The statement is that, "We determined to relinquish the design of proceeding any further by water, and to await the arrival of horses from Chicago, which had been ordered to meet us near this place on the 10th." Then occurs the statement that a man was sent by land to Reddick's Deposit and returned the next day with the horses. I see no reason to object, that the horses were sent to meet them at Reddick's Deposit. I think it possible the horses had been ordered to meet them there. I do not think that is a necessary inference.

4827 Q. Have you any doubt about that in your own mind? Objection; witness answered the question.

Whereupon ensued a colloquy between counsel as to the propriety of the question.

4828 A. It seems to me the pertinent point, that having found the navigation so difficult they determined to relinquish the design of going any further by water and to await the arrival of horses from Chicago which had been ordered to meet them near this place on the 10th. Then occurs the statement that man was sent by land to Reddick's Deposit and then that he returned at a seasonable hour the next day with the horses.

I think it a fair deduction that the horses had been ordered to meet them at Reddick's Deposit. Can conceive of other circumstances which might affect the validity of that deduction. Since counsel asks me to be precise, I believe that amounts to a constitutional doubt in my mind. I have stated my opinion: I think it is probable they were sent to this place.

The element of doubt approximately would be as to whether they were to meet them at Reddick's Deposit or some other place near the point of which he speaks, where he says that the horses had been ordered to meet them near this place.

4829 I should consider it a probable inference that the design which Schoolcraft says he relinquished, was that

of proceeding by water up the Desplaines. I am not quite certain as to whether or not it is a necessary one.

Q. Have you any doubt in your own mind about it.

Objection: Witness has answered; question improper.

A. I can conceive other inferences that might enter in here.

I should say it is conceivable that they had all along intended to have their horses meet them at about that place and go on up on horseback to Chicago, but it is not probable, in my opinion. The design I think they referred to there as the design which they relinquished, is according to the statement, the design of proceeding any further by water. I am reading from the text.

4830 It seems to me this document stands on the same basis as that short account from Tonty, which was put into the record the other day. Tonty was coming up the Illinois and was headed for the fort on the St. Joseph, and would doubtless have continued his journey in a canoe if that had been possible; but evidently it was not possible to continue in a canoe and so he abandoned the canoe and went on land. I think Schoolcraft and Cass in 1821 would have continued their journey in the canoe as far as practicable. Do not suppose they expected it would be practicable to cross the Chicago portage in a canoe. Have said it seems to be probable they did not even expect, or did not feel that they would be able to go up the Desplaines in a canoe. Had that been practicable, I judge they would have done so.

Q. You feel perfectly positive in that opinion, do you?

Objection: Question improper.

A. What opinion?

COUNSEL FOR COMPLAINANT. The latter part, that they would have gone up if it would have been practicable.

A. Would say that I am basing my answer on the facts and information I have at my command. Inferences are always subject to change on the addition of new information. One who draws an inference in dealing with such matters can seldom say he is perfectly positive. If counsel will produce any new evidence will be glad to consider it and revise my inference accordingly, if it shall appear to need revision.

4831 Q. I am asking you merely as to the degree of positiveness that you have in reference to this reference?

A. I believe I have answered the question.

4831 Q. You regard this inference then as more than a mere probable one and one which you affirmatively draw, is that right?

A. I think the question is already answered.

Q. I think not.

Mr. SCOTT. I think it is. I object to the question.

Mr. CORNEAU. All right; see if you can find the answer, Mr. Satterlee.

Mr. SCOTT. The question is objected to because it is an improper question, and because the witness has answered as fully as can be required of a question of that nature; and because the question itself is not an intelligible question.

The WITNESS. I will ask for a reading of the record.

Mr. SCOTT. What counsel means by an affirmative inference I do not know in that connection.

Mr. CORNEAU. The witness has made a distinction between inferences which are probable or possible, and those which he himself draws, if I have followed his testimony correctly. He has many times refused to state whether or not he draws an inference. He has said that such an inference would be probable or possible, without undertaking himself to say which he draws. I want to know whether or not in this case he himself draws that inference and is satisfied that that is the correct inference to be drawn; or whether he regards that merely as one of these possible or probable inferences that somebody might draw, of which he has frequently spoken.

Mr. SCOTT. I think the witness has testified that he draws that inference, in substance.

Mr. CORNEAU. If that be so it will do no harm for him to so state briefly.

Mr. SCOTT. It will do harm to state it over and over again.

Mr. CORNEAU. When questions are put to the witness his answers are so elaborate and so long, and contain so many qualifications, that it is difficult to tell what he does mean.

Mr. SCOTT. I do not think so; he is entirely within his rights. It is not competent to ask a witness upon a subject like this, rigidly whether he absolutely comes to this conclusion or absolutely believes this or has no doubt about it. He is entirely within his rights in the form of answers he has given.

Mr. CORNEAU. I am not at all agreed with you on that, Mr. Scott.

Mr. CRESSY. I wish counsel for the defense had observed

that rule in the examination of the experts for the government.

Mr. SCOTT. You point out where I did not. I challenge you to point it out.

Mr. CORNEAU. Now, will you answer the question, Doctor. Unfortunately we cannot get a court ruling on the question at this time.

A. I am not quite certain what the question is. Will you read it to me?

(Record read.)

A. I understand that the inference in the question pertains to the design of Cass and Schoolcraft to come up the Illinois river route in a canoe as far as might be practicable. I draw that inference. I am not sure that I follow all of counsel's distinctions in the question as to what is—

I mean by the Illinois river route the Illinois river as continued by the Desplaines. By the Desplaines I did 4834 regard the Desplaines as a part of the Illinois river route, in making that statement a moment ago. I am not making a general statement, but applying it to this particular discussion.

As to whether I would make a general statement now, I will ask if counsel wants an account of the historical significance of that phrase, as to whether the Desplaines is regarded or has been regarded as a part of the Illinois river route at this time,

As to whether I regard it, the Desplaines, as a part of the Illinois river route when I spoke of it, I will say I did in that particular statement I made. I might not at another time.

4835 As to whether I regarded it as an impossible deduction or inference that Schoolcraft did not at any time intend to go by water beyond the point at which the horses had been ordered to meet him, I will say I have undertaken to show as clearly as I have been able to, what I regard as the reasonable deduction or inference from this narrative. I think that what counsel has pointed out would be a conceivable or possible inference.

As to whether I regard such an inference as improper, I would say, speaking as a historian, or as one who is endeavoring to do historical work in correct historical fashion, I would regard it as improper.

Q. Very well.

A. Because—

Q. Never mind your reasons; you will have an opportunity to explain on your redirect.

COUNSEL FOR DEFENDANT. Finish your answer.

COUNSEL FOR GOVERNMENT. He has answered the question; I object to his making any further answer. You may call his attention to it on redirect and have any explanation made you wish.

COUNSEL FOR DEFENDANT. You are permitted to complete your answer, Doctor.

A. I was about to continue then; because if the historian is trying to establish the truth, or what he believes to be the truth, it would be clearly improper from the historical point of view to draw a deduction which he does not think is the correct one that should be drawn.

Mr. CORNEAU. Q. Then you think that is the correct deduction, do you?

A. I believe I have sufficiently shown what I think as to the construction that should be put upon this matter.

Q. I am a little in doubt about it and I ask you now 4837 to answer the question.

A. Does counsel care to have me go over the matter again as to how I think this matter should be considered?

Q. Not in detail. You can answer that question yes or no.

A. I would not care to answer that yes or no.

Q. I ask you to do so.

A. I would ask Mr. Scott if I am required to do that.

Mr. SCOTT. Read the question.

(Previous question read.)

Mr. SCOTT. If you consider it is a question susceptible of a yes or no answer, you should answer it. If you do not, you should say so.

A. Assuming that counsel agrees as to what I have stated in the matter, what I think about the matter and what interpretation I put upon the narrative, I would answer this last question by saying that I would regard this as an improper or incorrect deduction. I suppose that will answer the question.

Mr. CORNEAU. No, sir; if you will leave out any assumption as to what I think, you may answer the question in some such way. I do not care whether you say yes or no, or say you think it is an improper deduction.

Mr. SCOTT. Will you read the answer to me?

(Answer read.)

Mr. CORNEAU. I ask you to answer the question yes or no if it is possible for you to do so.

4838 A. I ask the Commissioner to read the entire record again so far as it relates to this matter.

Mr. CORNEAU. I object to the reading of the whole record so far as it refers to this matter on the ground that it unduly delays us and has no pertinency whatever concerning this present question.

The WITNESS. I ask the Commissioner to read enough of the record to give me what pertains to this question that has just been asked.

Mr. CORNEAU. I object to the reading of the record by the Commissioner.

The WITNESS. I suppose I am entitled to know what the question is that I am expected to answer.

Mr. CORNEAU. Oh, you are entitled to have the question read.

A. That is what I am asking.

(Previous question read.)

A. I want to know what the deduction is. If you will read that part of the record, please, so as to make it clear how that was stated.

(Record read.)

Mr. SCOTT. I object to that question because the witness has already answered.

Mr. CORNEAU. If you merely wanted to have read 4839 what has occurred in the last few minutes I am perfectly willing to have all that read to you. I understood your request to be all the testimony on the subject of Schoolcraft this morning.

A. I have found out what I want to know, so I will not need to take advantage of counsel's offer. Now, if I understand the matter, I will undertake to answer the question. I would not consider that an impossible deduction or inference.

Q. Are you through with your answer?

A. If I have answered the question; I believe that answers the question.

Q. That answered the question. Now, the other question was, did you regard that inference or deduction as improper?

Mr. SCOTT. Objected to because he has answered that specifically.

A. I have answered that question.

Mr. CORNEAU. I thought he wanted to go over the whole

thing again. Will you just turn back and read the question which was not answered?

(Question read as follows: "Then you think that that is the incorrect deduction, do you?")

Mr SCOTT. That is objected to because that has been squarely answered.

Mr. CORNEAU. Not that question.

Mr. SCOTT. Yes, when he answered the question as to 4840 improper, he said in effect that it would be incorrect, and therefore that it would be improper.

Mr. CORNEAU. I put a question to him and then I asked him to answer that question yes or no. You then directed him to answer yes or no if he could, or in substance. He then made another answer that I do not apprehend answers my question, and then I put this question to him.

Mr. SCOTT. Will you read the answer where he said that as a historian, or speaking as a historian, and so on.

(Answer read as follows: "Speaking as a historian or as one who is endeavoring to do historical work in a correct historical fashion, I would regard it as improper.")

Mr. SCOTT. It seems to me he has answered.

Mr. CORNEAU. I do not think so.

A. In the light of such sources of information as I have and such study as I have made of the whole narrative, I think it would be an incorrect deduction.

The statements in Schoolcraft about the depth of water Floetz rocks, the water at the ford, and that there were several formidable rapids, and so on, which I have heretofore introduced are the only ones I have in mind about the conditions on the Desplaines. Am not prepared to say those are the only specific statements. There may be others. When I said at transcript 4168 (Abst., 1571), that Schoolcraft came to the conclusion that the Desplaines was not navigable at that particular season of the year, am not certain that I made the distinction at that time that he came to the conclusion that the Desplaines could not be used for boats for any distance as distinguished from the conclusion that there were obstructions at certain points. Aside from the narrative generally, this statement is based upon what appears on page 332 of Schoolcraft's *Travels in the Central Portion of the Mississippi Valley*, and from that page it appears that he had seen the river enough in the course of this horseback journey to conclude that these long

formidable rapids completely intercepted the navigation
4842 at this season; that he had met traders and talked with them who were transporting their goods in boats from the Chicago creek, and they gave him the information that they thought it would be practicable to enter the Illinois at Mount Joliet. The book says, Illinois, I suppose we would call that the Desplaines. He calls it the Illinois at that particular point. He goes on to point out that while that would make a portage of about 30 miles, it had been perceived that they in their own experience began it, that is to say the portage, far below this point, Mount Joliet. Then calls attention to the error of those who supposed that a canal of only eight or ten miles would be necessary. I do not understand in looking at this matter now (I do not remember whether I had that particular distinction in mind when I made the statement in the record) that this necessarily excludes the idea that a canoe could not use the Desplaines at all. I understand from this passage in a general way that Schoolcraft means to convey the idea that the Desplaines is not a practicable route for navigation.

That was the Cass expedition. It appears Schoolcraft came down the lake to Chicago in 1820. Was returning from the exploratory expedition to the sources of the Mississippi.

He was with Cass at that time. He was entertained by
4844 Kinzie to some extent, whether that means the whole period of his stay or not.

As to whether Kinzie was thoroughly familiar with conditions around Chicago and had pretty good opportunities, the best sort of opportunities to know about the Desplaines river and its use by traders and others, I would say I suppose that Kinzie ought to have known about those things.

As to whether Schoolcraft was Indian agent at Sault Ste.

Marie, from 1822 to 1831, I am not prepared to answer.
4845 If counsel says he was I would not question it. He was

Indian agent during that period. I do not recall his location with certainty. I suppose that he may have been Indian agent there, during this period.

Whereupon the witness' attention was directed to Senate Documents, First Session, 22nd Congress, Volume 2, pages 41 and 42. Witness informed that if he cared to verify it he could find some information in that volume. Whereupon, the witness replied: Unless something should develop to require me to do so, I do not care to verify it.

As to whether Sault Ste. Marie was right on the Mackinaw

Route, right at Mackinaw, I would say I think Sault Ste. Marie is at the opening of Lake Superior. Sault Ste. Marie is as stated by counsel a moment ago, on the St. Mary's river near the eastern end of the Northern Peninsula of Michigan. The water connection between Lake Superior and 4846 Lake Huron. I presume Schoolcraft was at Mackinaw frequently. He was there sometime.

As to whether he would have had opportunity there to speak to traders who were trading in the Illinois country and familiar with it from 1822 to 1831, I would say that without verifying the matter I would suppose that that may have been the case. I believe that Schoolcraft went with Governor Cass to the Fox river in 1827 and stayed there and that Cass rejoined him after making his trip up the Desplaines. I would say that I judge from what I see in the personal memoirs, that Schoolcraft went to Mackinaw 4847 in 1833, and I would observe in that connection that I understand the heyday of Mackinac as a fur trading center, had passed at that time. However, I think counsel is doubtless right in supposing that Schoolcraft had the means of familiarizing himself with the trade and travel of that region. If counsel says that he met and talked with Jean Baptiste Perrault, I have no reason to question it. I note here that Schoolcraft had manuscript of Jean Baptiste Perrault in his possession.

COUNSEL FOR COMPLAINANT. At page 352 of work entitled: "Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States: Collected and prepared under the direction of the Bureau of Indian Affairs, per Act of Congress of March 3rd, 1847, By Henry R. Schoolcraft, L.L.D.," is a reference to Schoolcraft meeting Perrault.

4848 Q. In your conclusions with regard to Schoolcraft, which begin at page 4160 (Abst., 1568) in the record and run over to I think page 4170 (Abst., 1568-1572), that you made any statement as to whether or not you as a historian accept these statements of Schoolcraft read into the record at page 330 (Abst., 154), as correct, namely, "The principal points at which the waters of the Mississippi river communicate by interlocking rivers and portages, with the lakes, are the following, proceeding from south to north, namely:

"1. By the Illinois and Chicago Creek, with Lake Michigan." * * * "The routes by the Illinois and the

Wisconsin, were first laid open by French enterprise, and have been used for canoes and flat-bottomed boats in their natural state, and without any practical improvement which as yet, facilitates the communication, about a hundred and sixty years."

Q. Will you state whether or not as a historian you accept that statement as correct?

A. See no particular reason to reject it at this moment. In that connection one would naturally subject the account to such criticism or interpretation as might be called for in making use of it. I have studied that to prepare myself to testify. Undertook to examine it as carefully as I might; in a general way; I have other duties also. Subject to the answer I gave a moment ago, I am quite willing to accept it. Do not care to investigate it any further.

Q. In other words, so far as your information and studies now go you accept that statement as correct, do you not?

A. Subject to the explanation I gave a moment ago, and which the Commissioner has just read, would accept the statement or statements. It seems, I am using plain English. Subject to what I said there, I accept them. If counsel wants me to explain that, I am quite willing and ready to. To illustrate: A statement is frequently made that the sun rises in the east. If counsel would ask me whether I accept that statement or reject it, I would say ordinarily I accept it.

4851 If counsel wanted me to go into detail, I probably would go into a further interpretation of it and add certain details as to the way in which I accepted that statement.

Just so as to the passage from Schoolcraft under discussion. He says in effect that the waters of the Mississippi communicate with the lakes by interlocking rivers and portages, and among other places, by the Illinois and Chicago Creek. Calling attention to the fact that the term portages is used here and that there is no indication as to the length of the portage, that is so far as his particular statement goes, it may be a portage of any length, I have no objection to accepting that statement that Schoolcraft has made.

If counsel wants to know just how I accept it, I would go on and point out in some such fashion as Graham and Philips have done, that at times no portage at all is required; at other times it is a portage of some length and at

other times a portage of greater length, extending at times as far as a point somewhere on the Illinois.

4852 As to the routes by the Illinois and Wisconsin, the statement is that they were laid open first by French enterprise. I have no objection to make as to that and consider it correct. That they have been used by canoes and flat bottomed boats in their natural state and without any improvement for about 160 years. My interpretation there would be that they did not use the canoes and flat bottom boats on the portages, but that they used the water route in those days. So with that explanation and calling attention to the variation in the length of the portages from season to season and from time to time, I am perfectly willing to accept the statement.

4853 Looking at Graham and Philips' report, I note that having discussed the matter of a canal connecting these bodies of water, he goes on to point out two difficulties, assuming that the canal were opened, and the second of these two difficulties is that during half the year the Plein does not contain water enough to float a boat. Suppose he did not mean to include the winter season in that half of the year for the reason that the winter season is not ordinarily a season of navigation; and for the further reason that much of the time if not all the time, perhaps it would not be true all of the time, the water in the canal would be frozen up. I believe I said in this connection, I would add something like three months to those six months. Did not mean to indicate any precise number of days I would add.

4854 That is my only reason for adding the winter months.

My conclusion is not based on affirmative statements in Graham and Philips beyond the statements mentioned.

Q. At transcript page 3770 (Abst., 1429) you made these statements: As to the report itself they point out that the Desplaines river in high water is from four to six feet deep and in places a mile wide; and in low water is dry or reduced to a gutter. This statement will be found at transcript page 255 (Abst., 114). Turning to that place, please point out where it states that the Desplaines river in high water is from four to six feet deep. In other words, are not Graham and Philips there talking about the arm of the Desplaines river extending from the Chicago river, which arm of the Desplaines is sometimes called the Chicago river?

A. I so understand. If an arm of the Plein is the Des-

plaines they are; if it is not they are not. It seems to be the sense of the passage that the main river was running approximately north and south, and that then there was
4855 another arm or creek or something running into it from the east from a point over somewhere near the south branch of the Chicago river, which is what they are speaking of in that passage. I believe that is what they speak of as being dry or reduced to a gutter at times. As to whether they are here talking of the Desplaines river proper, will say, they are talking specifically about the arm of the Plein. So far as that statement, of Graham and Philips, transcript 3770 (Abst., 1429) is concerned it seems to be applied specifically to
4856 this so-called arm of the Plein. Of course there is the other statement that during half of the year the Plein does not have water enough to float a boat.

As to whether wherever I may have said that in Graham and Phillips it was said that the Desplaines was dry or a gutter at certain seasons, I want it modified in this way, I would say that, wherever I based the statement on this part of the report; wherever I based it on the other statement that half of the year it had not water enough to float a boat, I do not think that any modification would be called for.

Q. I am talking about the statement that the Desplaines was dry or a gutter. You do not base that on anything but that passage, do you?

A. I have not now in mind all the times or places in the record where I have made that statement. I say wherever I based that statement on this part of the report it would be subject to the modification indicated.

Q. We have no way of telling what you were basing the statement on, Mr. Quaife. Do you want us to understand that you would say, speaking of the Desplaines river proper as distinguished from this arm, that it was at any time dry or reduced to a gutter.

A. Taking the report as a whole, or just this part of the report which you have directed my attention to?

Q. Taking the report as a whole.

A. I should think that if the Desplaines did not contain water enough to float a boat it could hardly be called a
4857 raging torrent during that half year. I would not, however, on the strength of that statement alone say that it was dry or a gutter. Do not recall now the statements counsel refers to; would not care to answer as to them without having them before me. Wherever I base the statement

on this part of the report, it would be subject to such modification, properly. Counsel says that he understands me to now say that I would not, basing my statement on any other part of the report, assert that the Desplaines was dry or a gutter; that is, the Desplaines river as distinguished from the arm we speak of, and asks if I would not modify that statement wherever I make it based on Graham and Philips' report. In reply would say I cannot make it any clearer than

I have already done. Here are two passages that go to 4858 indicate what Graham and Philips thought of the nature of the Desplaines. I have said two or three times that in so far as the first one was concerned it was subject to the modification indicated. If I were using the words dry or reduced to a gutter, I suppose every time I used them it has been with reference to this first part of the passage. I would modify it certainly in each instance. I did not construe the passage that for half a year the Desplaines did not contain water enough to float a boat as meaning that nowhere along the Desplaines would it float a boat. I would apply that to shallow places. I do not know whether I would to rapids. I presume the chief difficulty is because of lack of water at the rapids.

4859 There are various accounts of the Desplaines which go to indicate that its condition was such that it was not capable of navigation. For example, La Salle, Tonty, Charlevoix and so on.

Q. Well, we have just been over all of them. Now, I think you are getting away from the question altogether, if you will pardon me the interruption.

COUNSEL FOR DEFENDANT. I do not think so. You asked him if he found anything to indicate—

COUNSEL FOR GOVERNMENT. No, I asked him if he found any specific statements of any difficulties encountered except those found at rapids. We do not want to go over all this again. If he has any specific statement he is at liberty to produce it, of course.

A. It seems to me I have produced specific statements of the difficulties encountered at the rapids in referring to what La Salle and Charlevoix said about the river and in referring if I had been permitted to do to, to this report of Graham and Philips, that at times a portage of fifty 4860 miles was in the habit of being made. In referring to the statement in Schoolcraft that traders were making the portage to Mount Joliet, which I understand is some-

thing like thirty miles, I have nothing further than such statements as those in mind.

I believe I have employed an argument that we are to determine the exact nature of these difficulties which were encountered in using the river by reference to the accounts of those who had used it or who had attempted unsuccessfully to use it.

Being asked to turn to the accounts which specifically describe these difficulties to see if I can find any mention except the rapids, except such general statements, perhaps as La Salle's or Graham and Philip's, I call attention to the manuscript account of Hubbard's first year in the West, which I have already put into the record.

4861 He uses the word ripples as I have it in my notes.

I understand that a ripple is either a place where there is not water enough to float a boat; or had some such significance. Sometimes it is used as a synonym of rapid, I believe. Do not understand it was necessarily so used in this case. Will have to refer to dictionary to answer counsel any further. The first definition given here which seems to apply is:

"To assume or wear a ruffled surface, as water when agitated by a gentle wind or by running over a stony bottom; be covered with small waves or undulations."

Having that definition in mind, my understanding is that this term as it was sometimes used, was used in the 4862 sense that I have indicated a moment ago. It might be a synonym for rapids; it might be used to indicate that they reached a place where there was not sufficient water to float a boat. It appears from Hubbard's account that ripples occurred very frequently. Do not know that I would add anything to the statement itself in that manuscript as to that. It reads:

"The water of which, being low, floated the boats but short distances before it became necessary to lighten them, often taking all the goods out and passing the boats on rollers over the ripples to floating water."

4863 I would assume that it may have been used in the sense of passing over rocks or obstructions. It may have also been used in the other sense that I have indicated. Without further investigation as to the way in which the traders and voyagers in this period used the term I think I could throw no further light upon it.

4864 I wish to call attention to an error which appears on transcript 4650 (Abst., 1723) which requires correction. In answer to the question as to what sort of vessel the word barque refers to on that page, the passage under discussion is the report which Dablon made, and therefore the answer does not fit the question as it appears in the record. It can be made to do so, and this is how I would have it appear; that evidently Dablon had in mind boats capable of navigating the lakes.

4865 Without undertaking to verify what I have already stated or may have stated, will say the document deals with the difficulties of the carrying on of the trade between Canada and Illinois or the Mississippi, by way of the lakes; it appears from the second of the specific difficulties that are listed that among other establishments which would be necessary if this route is to be employed in the conduct of this trade, would be one at the lower part of the lake of the Illinois where navigation ends at a place named Checagou. To lock up there the goods they have brought in the barges and have them transported by canoes two leagues from there. Said canoes only can navigate as far as the village of the Illinois for a space of forty leagues, contrary to what Joliet had said, that there was only a quarter of a league of interruption of navigation. And further, the third point:

"One of them (I understand this also means an establishment) is also needed among the Illinois where barges can navigate."

I suppose La Salle had in mind here that the boats that navigate the lake cannot navigate the Desplaines, for he speaks of an establishment where the goods brought by way of the lake can be locked up and then transported to the Desplaines. He does not use the word Desplaines; further that for a space of forty leagues only canoes can be used; and then further down a similar establishment is needed among the Illinois where barges can navigate, evidently implying that they cannot navigate above this point or to this point.

He says at this point, to continue the reading where I left off:

"Contrary to what Joliet had said, that there was only a quarter of a league of interruption of navigation."

At transcript pages 710-711 (Abst., 294), Alvord's translation is as follows:

"And at this time, should one make in summer a little canal of a quarter of a league, says Joliet, from the lake to the basin which leads to the Illinois River, ships could enter into Chicago and descend to the sea. That might perhaps happen in the spring-time, but not in the summer, because there is no water."

The word "ship" is Alvord's translation of the word "barques."

Whereupon, counsel for complainant read and called the attention of the witness to the following extracts to assist in determining what Hubbard meant by ripples in the river. A passage from Schoolcraft's *Travels in the Central Portions of the Mississippi Valley*, page 333:

"We are indebted to a gentleman of correct observation, who has explored the route with particular reference to the subject of a canal, for the following information respecting these parts of the bed of the Illinois and Desplaines, which we have not personally examined. The computed distance from the ford on the Desplaines to its union with the Kankakee, is about forty-
4868 five miles. Fifteen miles of this distance consists of Lake Joliet, and the remainder is almost equally divided between ripples and still waters. The next obstruction occurs at the Kickapoo rapids, which have a fall of perhaps six feet, in the distance of a mile and a quarter. But these yield in importance to the Rock Fort rapids, which are commonly computed to be twenty-four miles long."

I do not read this as a correct statement in regard to the character of the Desplaines but merely in reference to the meaning of the word ripples.

"The total fall of the river in this distance cannot be less than thirty-five or forty feet. The Illinois, in passing these rapids, is spread over a wide surface, which reduces the depth to a few inches, and hence it has been suggested, that by cutting a channel in the rocks so as to concentrate the volume, a good and sufficient navigation would be afforded for boats of eight or ten tons burden. By a similar labour, the whole series of rapids could be improved, and at perhaps a comparatively small expense."

Major Long's report:

"The river (speaking of the Desplaines, as I understand), throughout the above mentioned distance, has 4 or 5 short rapids or ripples that make their appearance only in times of low water. In every other part, it has the appearance of being a chain of stagnant pools and small lakes, affording a sufficient depth of water for boats of moderate draft."

Letter to Honorable John H. Woodruff, dated June 7, 1881, signed G. S. Hubbard, appearing in the volume entitled: "Autograph Letters, Vol. 71 of the Chicago Historical Society Collection of Works." (Reading):

"You ask me for my recollection of Mount Joliett, &c. I first saw that place in October, 1818. I was then a boy sixteen years old under the command of Antoine Deschamps, an old gray haired educated man, in charge of the American Fur Co.'s trading post on the Illinois river. His command was known as the Illinois Brigade comprised of twelve Mackinaw boats with which we coasted the eastern shore of Lake Michigan"—there is an interlineation above that "from Mackinaw," but just where it is intended to be inserted I am not clear.

4870 "Loaded with merchandise for the Indian trade on the Illinois river. Our boats were crossed empty from the head of the south branch of the Chicago river to the Desplaines, through what was then known as 'Mud Lake.' The goods transported across the 'portage' on our men's backs, reloaded at the Desplaines, which we descended to our destined trading post locations, the first on the Illinois river about 1 mile above the present city of Hennepin.

Next is Westby City, and on down 40 to 60 miles apart to its mouth rather 20 to 30 miles above. This embraced Mr. Deschamps' jurisdiction extending east to Wabash and west Mississippi river. The water in the DesPlane was low always in the fall, many places mere ripples. Our boats had frequently to be wholly or partially unloaded and goods backed down to a point of sufficient water to again float loaded, a short distance, and then repeated. It was a slow and fatiguing work, performed willingly and cheerfully by our Canadian voyagers, living principally on hulled corn soup. No other nation in the world better suited to such business. There was great rejoicing when we

reached the foot of the ripple below your city, having lake Joliet in view, for from there, the distances between shallow and deep water were greatly lessened."

4871 The WITNESS (continuing): I suppose from the general appearance of the letter it is in the handwriting of G. S. Hubbard. Have used the Hubbard manuscript. Do not pretend to be able to identify his handwriting with precision. I see no reason to reject the proposition that this is in Hubbard's hand. I judge from certain of these
4872 passages that the word "ripple" was sometimes used as a synonym for "rapid." Am not certain it was necessarily so used. The Century Dictionary says: This is a verb.

"To assume or wear a ruffled surface as water when agitated by a gentle wind or by running over a stony bottom; be covered with small waves or undulations.

2. To make a sound as of water running over a rough bottom; as, laughter rippling pleasantly."

Next the transitive verb.

"To fret or agitate lightly, as the surface of water; form in small waves or undulations; curl.

Then the noun, ripple, the first meaning given being

"The light fretting or ruffling of the surface of water; a little curling wave; an undulation.

2. A sound like that of water running over a stony bottom; as, a ripple of laughter."

Q. I do not think there is any occasion to go any further with the dictionary, Mr. Quaife. My question was merely as to whether or not those passages I read gave you any aid. We can all refer to the dictionary.

COUNSEL FOR DEFENDANT. It will be only the question of whether we do it here or whether we do it on the redirect.

COUNSEL FOR GOVERNMENT. That is the only question, but I think it is unnecessary to encumber the record with a lot of extracts from the dictionary at this point.

A. I will say for the record the only reason I referred to the dictionary is this: That I was giving all the meanings under "ripple," and I found a reference to the word
4873 "wave," and lest I be convicted later on of inconsistency I preferred to look up that reference and put in whatever might occur there.

4874 The basis of my objection to assenting to the proposition that a ripple is necessarily a rapid is this: that I have in mind that I have seen in the course of my reading

a different use of the word, such as I have indicated. Have not in mind the reference and cannot turn to it. Am under the impression that the word was sometimes used in the other sense.

4875 It would appear that from these passages that it was certainly used in the sense of rapid at times; to that I have no objection. Whether it was always used in that sense or not, I refrain from affirming. I am not sceptical about the proposition that during the period Hubbard made a number of such trips between 1818 and 1825, as are indicated in his Life.

4876 I might have some doubt as to the dates. Hubbard might and doubtless did get mixed on those dates as the man who gave us the work which is in part biographical and part autobiographical, may likewise be and doubtless was at times in error.

Q. What other matters do you have in mind as being details? His general description of his trips, incidents that occurred along them and so on?

A. That is intangible and indefinite. What I have in 4877 mind is that this volume which purports to be a sketch of Hubbard's life is partly autobiographical according to the preface, partly compiled from the narrations which Hubbard made, and from letters and other documents written during the years of which they treat. The man who prepared this volume was Henry Hamilton, who in his general prefatory note does not indicate any further than the passage just referred to as to what those narrations might be.

I showed in my discussion of the account of the Cass trip that it is probable that general historical works were relied upon by the compiler of that account, and therefore, he is as likely to error in his biographical account as would be the case in an account which another historian might make up of that trip. Assuming that the work is purely autobiographical, which is not the case, it is written something like half a century after the events which it describes. Counsel can satisfy himself by an examination of this manuscript that such things as dates, at least, and possibly other things, have been 4878 altered, either by Hubbard or by someone else. Perhaps only to the extent of a grammatical change; the dates have been altered. To answer further would have to look into the manuscript. In the discussion of the portion of the book dealing with the trip of Cass in the Winnebago outbreak, I showed a good many details of one sort or another, were

inaccurate. Have not subjected any other portion of the book to a careful examination as I did that particular portion, and do not know whether such examination would produce an equal number or proportionate number of errors or not.

4879 The statement in regard to the origin of the name "Isle la Cache" is evidently in error. In view of all those things, I say the book is one, in so far as details are concerned, that should be used with caution and is properly subject to verification. I say referring especially to the manuscript labeled "Recollections of the First Year of His Life as an Indian Trader," I have an idea of its history. It is not, I believe, susceptible of proof.

4880 Stating from memory as to who wrote Life of Hubbard, Hamilton states that this manuscript is in Gurdon Hubbard's handwriting, and details some incidents of his early life. Do not know who transmitted the document to the Historical Society. Understand the Society has received the manuscript from the estate of Mrs. Mary Ann Hubbard, and has recently received letters from Miss Marsh, who was the personal companion of Hubbard.

4881 Do not know anything about a letter of transmittal. My statement is based on what Mr. Hamilton has written. It was not in a letter of transmittal. It was in a letter of June 20, 1911. Hamilton does not know for what particular occasion the manuscript was written. States Hubbard was called upon to deliver an address, and this is evidently one of them. I turned to the autograph letter files of the Historical Society and found there, from two letters which appear bearing date about December, 1881, or 1880, references to what apparently was this particular address contained in this manuscript. A reference to the record of the Society reveals no further light. Suppose an address was delivered about December 1, 1881, or 1880.

4882 The date was 1880. Having the letters before me just referred to, the first was written by A. D. Hager, Secretary of the Chicago Historical Society on December 2, 1880, to G. S. Hubbard (reading):

"I wish to congratulate and thank you for giving your first years experience in the West and to ask a few favors:

1st. Will you let this Society have the manuscript of that lecture to preserve? And secondly will you give this society your Second or some subsequent years experience in a paper at some meeting this winter—even

within this month, notwithstanding we have two lectures already arranged for this month—Washburne on the 14th & Van Schaak on the 21st.”

The other letter bears the same date, is written by Isaac N. Arnold, President of the Chicago Historical Society (reading):

“Dear Mr. Hubbard:

I was so lame last night I could not go & hear you. I was very sorry.

Can't you give us a paper on your reminiscences some time this winter. I refer to the His. Society?

I hope you can & will.

Very truly yours,

(Signed) ISAAC N. ARNOLD.”

The manuscript is labeled evidently by an attendant of the Chicago Historical Society, “Manuscript of Gurdon S. Hubbard's Recollection of the First Year of his Life as an Indian Trader.”

In another notation, “Box 4” and a reading of the manuscript shows that it is, as the title indicates, a manuscript dealing with that first year of Hubbard's life in the west. Hence my conclusions as to the probable date of the delivery of the address or discourse.

Referring to my opinion as to whether or not the most active trade carried on on the Desplaines river falls between the period 1773 and 1825, or thereabouts, will say without assuming any responsibility as to relevancy of certain of the sources to which my attention was called in asking the question, I think there was more trade and travel in the Illinois country and in the northwest generally in the years from 1783 to 1825 than in any equal prior period. A large portion of the sources counsel has cited in the question were only as to this general condition of trade and travel in this region, having no direct bearing on the use of the Desplaines river, further than pertains to the general inference that may be drawn that there were more travelers who has occasion to pass along the Illinois river route between the Mississippi and Lake Michigan, or vice versa, would probably make such use of the Desplaines as was feasible and desirable in view of the particular circumstances in any specific case.

4885 By going through the table of contents of the authorities referred to by the Government, could enumerate those authorities with which I was familiar before I worked on this case. I understand that one may say he is familiar

with a work if he knows something in a general way as to its standing, contents and reputation. Possibly, further than that, he ought to have at least seen the work, although that would not necessarily follow—it probably would usually follow, and had made some use of it.

I have seen and used, as I recall, Beck's Gazetteer. In a general way, I suppose I am familiar with Father Allouez, and knew in general of Chittenden's American Fur Trade. Have not made any particular use myself of the volume. Morse's American Gazetteer and other publications of his, or many of them, I had used or referred to. A Gazetteer obviously one would not read it through at any one time. Professor Ferrand's book in the American National Series, I made considerable use of in connection with the general series.

4887 American State Papers, Miscellaneous, being a compilation of hundreds or thousands of documents, can say as anyone could and only in that way probably, that I am familiar with the general series and have made use of it. Andreas Early History of Chicago I have used.

4888 As to Bains, Alexander Henry the Elder, I did not know, this particular volume. Knew in a general way of Alexander Henry and the particular part of his career in the west most frequently referred to. Have used this particular volume of the Northern Indiana Historical Society. Have used Beck's Gazetteer and Blanchard's History of Illinois. Many of these authorities which the Government has used occur merely as individual documents in larger collections. In a general way, have made considerable use of the Board of Trade Report in the Michigan Pioneer and Historical Collections and Wisconsin Historical Society Collections; to some extent of the Haldimand Collection. The Cahokia records constitute a part of the Illinois

4889 Historical Collection; have used those. Winsor, Narrative and Critical History; Schoolcraft I have referred to at various times. Am not sure I have referred to everyone of the different volumes of Schoolcraft that have now been used. In fact, I think not. Am familiar with his works in general and with the standing of Doctor Shea and his work. Have not known the Catholic Church in Colonial Days at first hand. Charlevoix's standing—one may be familiar with these things, it seems to me, from the use of such works as Winsor's Narrative and Critical History and Shea's Republications, and so forth. I

prefer to use an English work rather than a French work when it is possible.

Hurlbut's Antiquities. Believe I have seen Ebenezer Child's document, occurring in the Wisconsin Historical Society Collections. Am familiar with those in a general way.

4890 Hennepin's New Discovery. The document or lecture on the location of the Guardian Angel Mission. Am unable to make a statement about Major Long's report, whether I was already cognizant of that or not.

Father Dablon. Believe I had not used Darby's Tour from New York to Detroit. Knew of the man.

Never made use of Margry in the original until I came in this case. Many of these documents in Margry one may first familiarize himself with in the general study of American history.

Know something about the character, standing and career of Robert Dickson. Do not recall ever having seen Drown's Peoria. Am unable to say whether I have seen references to it. Believe I have never used DuPratz History of Louisiana. Knew of its existence and the general field which it treated. Have used McCulloch's Early Day in Chicago and Peoria, being one of the C. H. S. Collections. Am certain I had seen and turned through Shea's Early Voyages. Do not recall whether I read St. Cosme's account at that time or

4891 not. I may claim to be generally familiar with Thwaites' Early Western Travels. Do not pretend to have read them all, as probably United States' expert would admit he had not done.

(Motion to strike out last statement.)

Governor Edwards' Work and Career I had become familiar with to some extent through the use of the Edwards Papers and History of Edwards' Illinois and Life, contained in the Chicago Historical Society Collections.

My attention has been called to Estwick Evans, and I have spoken of Professor Farrand's book in the American Nation Series. Have made considerable use of Fergus' works in the Fergus Historical Series. As to Flint, can speak only generally. Do not recall what use I have made of this particular volume; was cognizant in a general way of Flint's work and place in American historical literature.

4892 So with Ford's History of Illinois, and of the reports of Frontenac; and Furman's Letter which was published in Andreas. Do not recall having seen Gallatin's Report to the United States Senate, but that is one of the various docu-

ments in the American State Papers, concerning which have already spoken. Have studied Treaty of Greenville in various ways; cannot say whether I had ever read the original treaty through from beginning to end, before I came into this case. Think I had not at the present moment read it through.

I was cognizant with Hager in Andreas. Believe I had referred to it, although am not certain. Seem to have been familiar with Hall's Notes on the Western States.

I will say at this point that if counsel should ask me now the contents of each of these volumes, would not undertake to tell him. If I claimed to be familiar with a book in a general way, I am speaking without reference to just what it may contain.

4893 Had used Heward's Journal. Hinsdale's Old Northwest and Historical Magazines, the latter a publication had not used all parts of it. Without seeing Blanchard's History of Illinois, could say nothing about it. Suppose this is Rufus Blanchard's History. Have disposed of Flint's History of the Mississippi Valley in my general statement with reference to Flint. I have used the lectures that Woodruff delivered. Am not certain, but I think I had not used this particular history of Will County. Had used and read Hoffman's Winter in the West to considerable extent. Had read through Hubbard's Life by Hamilton.

4894 All I can say about Hutchins' Topographical Description is that the character of the man was not especially new to me, though I believe had not in mind any considerable detail about him when I came into the case. Had used Moses' History of Illinois. Cannot make a statement about Imlay, whether I had actually used his book or not. My impression is I had not at the time, although I knew his place approximately in American history. Do not know who Eliza P. Jones may have been. Recall nothing about him. Would put Joutel about as I have some others, that I probably have a general although probably not a detailed knowledge as to him. Could have located him in connection with La Salle, no doubt, and perhaps gone further than that. Had seen and looked through Keating's Account of the Long Expedition of 1823.

4895 Think had never seen Kinzie's letter of July 15, 1815.

In a general way, was familiar with Lahontan, and certainly with Captain Langlade. Shall not attempt to answer as to the various references that occur here to Langlade.

Had never seen the Ayer Manuscript, the letters with reference to Langlade. Knew something about La Salle and the

various works of Parkman and doubtless others who treat of La Salle.

LaSource would class with what I have said about St. Cosme. In a general way knew of or about these accounts of Marquette found in Jesuit Relations, from such works as Parkman, Winsor and other works of that character. Had used Jesuit Relations to some extent with reference to Marquette. Am unable to make a positive statement at this time.

Membre's Narrative occurred in Shea, so what I said generally about Shea, will doubtless apply to Membre.

Do not think ever had used Navigator in the original. However, in one volume of Hurlbert's Series the whole subject of the Ohio River Navigation and History is treated of. Perhaps it would be fair to say that in that way am familiar with the Navigator, or the thing at any rate with which it deals, to some extent.

I know the place in the literature of American history of the New York Colonial Documents, being a mere collection of documents obviously had never read any considerable number of them. Have spoken in a general way of Schoolcraft's works. Note that Perrault's Narrative occurred in one of Schoolcraft's volumes. Recall no previous familiarity with that particular document. Can make no statement as to Peter Pond's Journal; may or may not have seen it. It occurs in the Wisconsin Historical Society Collections, and so with Perrot's Memoirs in the same series, also Pierre Paquette. As to the various citations of the Wisconsin Historical Society Collections, I turned through many of those volumes, and used many of the documents in them.

4897 Have certainly used some of these, but probably had not used others before I came into this case. Never heard of Gershom Flagg until complainant's witness was instrumental in calling him to my attention. Here are various reports of committees to Congress. Obviously would not be expected to make any general statements as to these committee reports. The same applies to the various Senate documents.

I knew of Smith's History of Wisconsin. Believe have had it in my hands. Have not in mind any particular knowledge of the volume further than that. Spoke of Joutel's Journal. Had never used Stiles' Edition. Do not know whether I was aware of its existence or not. Had used for purposes of reference, the St. Clair paper by William Henry Smith.

4898 In a general way, as I said in speaking of La Salle, was familiar with Tonty's career in America. I note a reference to Faulkner's Discovery of the Mississippi in this connection, and do not think I was familiar with that, or that I am at the present time. The volume of Wheeler on the Trail of Lewis and Clark, was not familiar with at the time, though I was familiar with the place in American history of Lewis and Clark, and have frequently used books that deal with the subject. Recall no particular reference to this of Wheeler, however. Turner's Essay on the character and Influence of the Indian Trade in Wisconsin, think had not used this particular essay occurring in the Johns Hopkins Series. Have used that series at various times in course of my study and work. Am not familiar with Warden's United States.

That completes my answer so far as I can base it on the perusal of the index.

4899 Beck wrote a gazetteer of Illinois, published about 1823; believe he was in western country at and after the time when gazetteer was written or published. Believe he was down somewhere in the lower part of the State of Illinois. Would have to verify that to be certain. Do not recall how long he had been in that part of the country.

COUNSEL FOR COMPLAINANT (reading):

4900 "Under the impression, that a more detailed description of these states than had hitherto been published, would be useful, and perhaps interesting, I commenced, shortly after my removal to Missouri in 1819, the collection of materials for the present work. I travelled over a considerable portion of these states, and became acquainted with a number of intelligent gentlemen, residing in different parts of them, who afforded me much assistance in the prosecution of my design. The different state officers, also, were so obliging as to allow me the privilege of perusing many valuable documents in their offices, and making such extracts from them as I desired," and so on.

The WITNESS (continuing): That statement I take it goes to the sources of Beck's knowledge. There is a further indication in the preface as to what the sources of that knowledge were, and as to the books he had used, etc. I judge
4901 that if he had been in lower Illinois, and around St. Louis, as he evidently was, that it is possible he may

have talked with individuals familiar with the conditions of the Desplaines in Illinois and around Chicago.

My attention is directed to the extract from Beck, appearing at transcript pages 289 and 290 (Abst., 132), beginning, "A few years since the country south and west of Lake Michigan, was explored by Messrs. Phillips and Graham," and running to the end of the paragraph on transcript, page 290. As to whether I would accept the statement made there with reference to the passage by boats of eight or ten tons burden, as true, would undertake to elaborate or condition the statement there made in any statement of my own attitude with reference to its validity. Subject to proper explanation and criticism, I would accept it. Would be glad to indicate the way, if counsel cares to have me.

Q. You may indicate the way. I refer, of course, 4902 only to that specific statement to this particular fact: "So that boats of eight and ten tons burden pass and repass from the lakes to the Mississippi through this natural route?"

A. Counsel has so limited the statement that he has distorted Beck's own proposition. Would not care to base any answer whatever on the portion of the statement counsel has just limited me to.

4903 Understand that there were times when due to the melting of the snow in the spring floods, that was likely to result at that season of the year, the waters of the Chicago river and Desplaines were connected in such a way as Hubbard indicates or Child, where the prairie was overflowed; see no reason to doubt that at such times it was possible for a Mackinaw boat which had a flat bottom, to pass across from one to the other. Hubbard makes it clear that the Mackinac boats they used sometimes did pass across. They, however, did not use boats of eight or ten tons burthen. Not knowing how great the draft of an eight or ten ton boat might be, do not know that I would care to give any further definite opinion as to whether it was possible for a boat of that size to pass.

4905 There are some things that would require interpretation in Beck's statement, "These streams approximate within three miles of each other, and when swelled by heavy falls of rain, actually unite so that boats of eight or ten tons burthen pass and repass from the lakes to the Mississippi through this natural route."

First, in the opening statement that the streams approxi-

mate three miles of each other. Sometimes that is true and sometimes the distance is much shorter than three miles, and perhaps sometimes not quite so short a distance. The closing statement that boats of eight or ten tons burthen pass and repass from the lakes to the Mississippi, I understand to be given by Mr. Beck as a general statement of a constant, frequent or general practice. I do not understand that the historical evidence justifies such statement, putting that interpretation that I have upon it.

The passage from Wau Bun, upon which I base my statement at transcript page 3696 (Abst., 1402), "This states that Kinzie carried on most of his trade with out-stations, by means of pack horses" is, from the Caxton Edition of Wau Bun, page 150 (reading):

4906 "Each trading post had its superintendent and its complement of engages—its train of pack horses and its equipment of boats and canoes. From most of the stations the 'fur and peltries' were brought to Chicago on pack horses, and the goods necessary for the trade were transported in return by the same method."

It states on the same page that Kinzie's stations were at Milwaukee, Rock River, and one or more not entirely clear, on the Illinois and Kankakee; and Kankakee, with the Pottawattamies of the Prairies, and with the Kickapoos in which was called "LeLarge," afterwards known as Sangamon County.

4907 As to whether there is anything in the passage to show that Kinzie used pack horses in preference to canoes from his Illinois river station or stations for example, will say I think there is no more detail than has just been read into the record.

As to whether, so far as this particular passage from Wau Bun is concerned, there is no inconsistency between the passage and the possibility that Kinzie sent his furs and peltries from his Illinois stations to Chicago in canoes, I would say the passage states, "from most of the stations the furs and peltries were brought to Chicago on pack horses, and the goods necessary for the trade were transported in return by the same method." The very use of the words "from most of the stations" would not necessarily indicate to my mind that there were some stations from which he used canoes in preference to pack horses.

4908 It would indicate to my mind that there may have been some stations from which he had something else

than pack horses. If counsel assumes that nothing else could have been used but canoes and pack horses, of course it might be taken to indicate that from some of the stations he used canoes.

Q. There is no other indication in the passage as to what means of transportation were used other than the statement that each station had its complement of canoes and pack horses.

Objection: Whatever is in the book speaks for itself.

A. Am not prepared to make a statement on the whole book without an opportunity to examine it. From memory am confining myself to the book, I recall nothing else. If counsel means to let me speak from my general knowledge,

I have something else to say. Do not know as I have 4909 any particular general knowledge with reference to Kinzie on this point. As to whether I would regard it as an improper construction of that whole passage, to construe it to mean that from some of these stations Kinzie did use canoes to transport his furs and peltries to Chicago, I would say I see no statement to that effect.

Q. I did not say you did, I asked you if you would regard that as an improper construction of the passage.

A. If you mean to ask me whether it is possible to suppose in the light of that passage that canoes were used I would say certainly it is possible. I do not see sufficient warranty for drawing such a construction; would want something more to construe, I believe.

4910 The point I was on at transcript page 3694 (Abst., 1401), I was endeavoring to show, and I thing successfully, that it is not a necessary conclusion that because the fur trade was being carried on, it was being carried on in canoes. I showed at transcript pages 3964 and 3965 that Hubbard carried it on without canoes, especially because of the difficulty of using the portage to the Desplaines river route. In that connection I cited this passage from Wau Bun to show that John Kinzie, another trader in this vicinity, also was in the habit of using horse in carrying on a large part of his trade. I believe I had no further intent in the matter than the explanation indicates.

4911 As to whether I wanted to create the impression (on my direct examination) that Kinzie did not use canoes to transport his furs from the Illinois river to Chicago, I would say I meant to indicate, as I have said, that two of

the leading traders in this region carried on their transportation of the furs and goods by other means than the canoe and the river, so that it is not at all a necessary inference that because there was fur trade or travel in this region that it went by boat along the Desplaines. Am not sure I had any particular desire in mind about wanting you to infer anything about Kinzie's use of canoes at trading posts which had waterways between them and Chicago.

4912 Without being entirely clear as to the detailed location of some of these places, I suppose it is true that some of these points had no waterway to Chicago. At Milwaukee there was evidently one, also at the Rock River, though at what point in the Rock River does not appear. Presume that would not have been so located as to have direct waterway communication to Chicago. There was one on the Illinois and Kankakee, the exact location not apparent. Then follows the statement that each station had its superintendent, and its complement of engages, etc. Then further that "most of the stations the furs and peltries and the goods necessary for the trade were transported by pack horses from those stations."

COUNSEL FOR DEFENDANT. Beck, page 21 (reading):

"The Desplaines for 14 or 16 miles below its junction with the swamp above mentioned, has scarcely any fall, and may be said to be on a level. Below this the rapids commence, and continue for a considerable distance. A short distance below the commencement of the rapids, the Lake and Desplaines are supposed to be on a level. To this place, therefore, the canal would only require an average excavation of 6 or 8 feet. It is the opinion of some who have attended to this subject, that the canal should be fed from the Desplaines; but the objections to rivers for supplies of water, apply with double force
4913 in this section of the country. It is well known that in the spring all these streams are so filled with water as to overflow their banks for a considerable distance; during this season no canal would be safe, but must unquestionably be swept away. Again, in the autumn they are on the opposite extreme; creeks, ponds and rivers, are completely drained of their water, to supply that immense and greedy conductor, the Mississippi. It is not unfrequently the case, that the savages and travellers are compelled to carry water with them in bladders, and

that they cross the beds of large streams without finding sufficient to quench their thirst."

The WITNESS (continuing): I know of the treaty with the Ottawa Indians of 1816. I have none of it detailed in mind. I believe I recall in general way that it ceded to the government a strip of land about twenty miles wide extending from Lake Michigan to the Illinois.

4914 It is my impression that the object of the treaty was as stated in Blanchard's *Discovery and Conquest of the Northwest*, with the *History of Chicago*, edition of 1898, volume 1, pages 490 to 491. There may have been other objects, but that was one. I read from Blanchard, page 491, "The object in securing this strip of land was to construct a military road to facilitate the building of the proposed ship canal."

4915 Doubtless some of the people of the Illinois country were familiar with the treaty and its purposes at that time, and some were not. Would not consider that a necessary assumption at all in a case of a man like Darby. I am not sure would consider it fair or unfair. He might have known and might not. He is not such a man as I would think of, as would certainly know and be familiar with it. It is evident he turned his attention to the subject before he wrote his book of a proposed waterways, though it is quite evident he did not make a very thoroughgoing investigation, if he investigated at all. I say that because of the character of the passage on pages 27 and 28 and following, this section of general remarks. At transcript page 3724 (Abst., 4916 1411), referring to the statement about the Benton editorial. I said, "It seems to me that such a statement raises suspicion as to the validity of Darby in the mind of the student. The idea that a single editorial which is obviously a biased one, could decide so important a question is little short of absurd." The statement in the book that, "The following interest notice decides the long contested problem" directly contradicts counsel's assumption or supposition that what settled the controversy in Darby's mind was the fact that the government had, by obtaining the cession of this land for the purpose of building the canal and by sending surveyors out to survey the land, and so on, shown its purpose to undertake the canal project. The notice begins with the statement about the sending of Graham and Philips to make the survey of the land ceded by the treaty of 1816.

4917 Then follows the editor's statement of his opinion about the feasibility of water communication. I would not consider it impossible that what Darby had in mind when he said that that notice settled the question, was the fact that that notice showed that what he called the long contested problem had eventually been taken up by the government as a project, and that the government had gone ahead and obtained a cession of lands for that purpose and sent surveyors to survey it. The problem Darby was speaking of was the natural water communication between the St. Lawrence and Mississippi rivers.

4918 Q. Do you think it is a fair inference from that passage that Darby in stating that notice settled the long contested problem, was basing his statement merely on what the editorial said as to the use of the Desplaines in the past?

A. I should think that Darby himself would be pretty good authority for that. His statement is that "the following interesting notice decides the long contested problem," etc.

Motion to strike out.

(Question read.)

A. The statement calls for an inference, I believe. I would infer from what occurs then in the body of the text that Darby had other facts or information in mind, and suppose he continued to hold them in mind when he was making this statement.

Q. So that you did not want us to infer that you drew the inference which I stated in my last question, when you said at transcript page 3724 (Abst., 1411), "The idea that a single editorial which is obviously a biased one, could decide so important a question is little short of absurd"; is that right?

A. My attitude is simply this: We have a book which gives us remarks or observations of a man who made a tour from New York to Detroit in 1818, and as an appendix to the book, under the head of General Remarks, he has proceeded to insert some information with reference to a water communication between the waters of the St. Lawrence and the

Mississippi rivers by way of the Chicago and Illinois
4920 rivers. I think it perfectly evident from the appendix he made no deep study of the matter, and his knowledge of the geography of this region was not accurate or correct, as one would expect of a man whom we might say had investigated the subject; and that he had chanced upon or had come across a newspaper editorial which apparently coincided with his views and perhaps contained further information; and that

he proceeds to append it to his general remarks to the effect that it decides the long contested problem. Apparently he gave it his approval, at least saw no strong reason for dissenting for it, or he would not have appended this editorial for the information of his readers, with this general blanket approval that is contained in the opening sentence of his introduction.

The map which is appended to this book throws some light on the question under discussion.

Motion to strike out as not responsive.

(Question read.)

4921 A. As pointed out, there are statements as to the geography of this region contained in the body of the general remarks which precede, or to which is appended the editorial. Do not suppose he forgot he had that information when he was editing the editorial. It does not seem evident to me that to his mind the editorial was an important and decisive factor, at least so he presents it here.

Motion to strike out.

Q. I am asking you, as to how you wanted to be understood by us in respect to the matter I have suggested?

Objection: Question has been answered.

A. Do not know as it is possible to add to answer just given. Evidently he thought he knew something about the geography of the region. The volume makes it evident his knowledge was not detailed or exact. He then adds the editorial to the introductory statement that has been read. Seems that it is chiefly on the editorial he would have the reader lay emphasis.

4922 I conclude he refers to what he has reproduced here.

Q. In any event you would conclude, would you not, that Darby took all parts of the editorial into consideration, when he said that the editorial settled the long contested question?

A. I conclude he refers to what he has reproduced here. I also conclude that these general remarks indicate that they are thrown in as a sort of addenda. He does not pretend they were based on any personal observations, that he, being interested in the Erie Canal, simply throws in here at the end some detail he happens to have collected or that he has had called to his attention about this other project. Further, he introduces this subject to the Chicago canal by saying, "We will now proceed to examine some of the various intended channels and inter-communications between the Mississippi and St. Lawrence valleys," etc.

Motion to strike out the latter part of the answer, beginning with the words, "I also conclude," as not responsive.

4923 With reference to Flint I have no reason to doubt that boats of five tons burden or thereabouts sometimes made a passage at certain seasons of the year though the morass from one extremity of which the waters are discharged into the Chicago of Lake Michigan, and from the other into the Plein of Illinois. Hubbard's boats were not quite as heavy as that, and easily went up the Desplaines as far as the quantity of water was concerned. No reason to doubt that a five ton boat did so in a season of high water in springtime, which Hubbard describes.

4924 It is my impression that Benton wrote the editorial just as printed in Darby. I know something of Benton. He lived in St. Louis from two to four years. With the study I made of the matter, came to no definite conclusion as to the date of the editorial.

4925 Will assume it was written in 1819. Will say that Benton had lived in St. Louis from two to four years, I believe. If the editorial was written in 1817, obviously the necessary correction would follow. Speaking from memory, the population of St. Louis at that time was somewhere around one to three thousand people. St. Louis was approximately at the junction of the Missouri and Mississippi, and was the principal city in the inland portion of the United States. It would be engaged in such trade as went up and down the Mississippi and Missouri, and to some extent, Ohio rivers; would be a center for immigrants and travelers and others in coming into the West; was becoming an important center for the fur trade.

4926 I would judge the river or rivers were the chief means of transportation.

Q. Is your observation at transcript page 3726 (Abst., 1412): "It is a matter of common knowledge that newspaper editors write on all sorts of subjects, about only a small proportion of which they are likely to have personal knowledge," fairly applicable to Benton in connection with his statements that hundreds or thousands of boats had been seen at St. Louis that had come down, and so on?

A. Am not aware that Benton at this time had ever been to Chicago or up the Desplaines river route. If he had not, he could hardly base the statement on personal knowledge. He was generally supposed to have come to St. Louis some

time between 1815 and 1817, according to this Life. The editorial was supposed to have been written either in 1817 or 1819, I would suppose it improbable that Benton had ever been at Chicago at this early period.

4927 Pursuant to request by Complainant's Counsel the witness thereupon read from "The Life of Thomas Hart Benton, by William M. Meigs. Author of "The Life of Charles Jared Ingersol," "The Growth of the Constitution in the Federal Convention of 1787," etc. Philadelphia and London, J. B. Lippincott Company, 1904," page 96, as follows:

"When in 1818 or 1819 a commission came to St. Louis directed by the Secretary of War to run a line from the southern end of Lake Michigan to the Mississippi, it was Benton's geographical knowledge that led him to propose to them 'to examine the ground between Chicago and the headwaters of the Illinois river, with a view to the construction of a canal by the Federal Government.' They accordingly made this survey, and upon their return submitted all their observations to him, and he it was who actually wrote the report they made in favor of that route for the canal. He printed the report in the St. Louis Enquirer, probably in April, 1819, and supplemented it by editorial articles, and wrote years later that it 'was probably the first formal communication, upon authentic data, in favor of the Chicago Canal. * * * But I must confess I did not foresee then what I have since seen—the Falls of Niagara surmounted by a ship canal, and a schooner clearing from Chicago to Liverpool,' with a footnote at this point.

4929 As to whether, as a resident of the small town that St. Louis was in those days, Benton would have had excellent opportunities to see and talk to those who might have come down in boats if boats had come down the Des-plaines river, would say would think being a newspaper editor, as I believe complainant's witness says Benton was, he might have talked with whomever came to St. Louis in this period. He appeared to have been interested in the whole subject of internal improvement. Assuming that Benton came to St. Louis in 1817 and that the editorial occurred in that year, he may have known little about the 4930 matter. Assuming that he came in 1815 and the editorial was written in 1819, think he might have conversed with fur traders to a considerable extent in that four

year period. I think it improbable he made any personal investigation. If by investigation is meant talking with fur traders, I see no improbability in supposing that Benton had engaged in such talk or investigation.

Q. Such an investigation as that would be enough to give what he said great weight, would it not, if he had made it?

Objection: Not a matter to require conclusion of witness; argumentative.

A. I would say that that would depend altogether on circumstances. Benton was a man of keen intellect and 4931 of immense activity, and of violent prejudices; when he engaged in a cause or controversy, he used oftentimes very extreme language, and went into it heart and soul. It is evident from what has been read of his life that he was much interested in this subject. He was emphatically not a man who would weigh his words judicially and coolly in such a cause. If upon examination of the statements they seemed to me exaggerated and improbable, I would naturally subject them to scrutiny and reject or accept them according to what the scrutiny might determine.

4932 Q. Now, is it your opinion that the time Benton wrote his editorial, some boats which had come down from Lake Michigan to St. Louis by way of the Desplaines river without portage, had been seen at St. Louis?

Objection: No basis in the record upon which opinion can be based.

A. If they "went across the portage and down the Desplaines and the Illinois" they would naturally come to St. Louis in due time. In that event they would be seen at St. Louis. I have no evidence on which to base a positive statement as to whether or not some boats had done that very thing. Do not think it improbable boats had been at St. Louis.

When I said at transcript page 3732 (Abst., 1414), "I do not mean to say that there was no trade or travel whatever, by means of other channels, but that this was the principal route between Canada and the Lower Illinois at that Period," the word "this" refers to the Wabash route, as to whether or not the Illinois river route was one of the other channels I had in mind I am not sure I had any particular channel in mind at that time. Did not assume 4933 to indicate any. Suppose I had in mind other possible ways of carrying trade. The Illinois river route was one of the channels of travel between Canada and Louisi-

ana, in this period or in general. That statement was based in part, as my direct will show, on the conclusions of Alvord in his introduction to the Cahokia record. In connection with my statement, speaking of Mrs. Baird's reminiscences, transcript page 3767 (Abst., 1428), I construe as one reason for the failure of the captain of the ship to get a cargo, that it was too early for furs; without reference to volume, not prepared to say that was the only reason. In determining the weight to be given statements found in historical sources, a consideration is the writer's opportunity for knowledge. It would depend on specific statements and circumstances surrounding them whether I would give weight to statements made even in a work whose general character I regard as unreliable, if the statements were made in reference to matters of which I could fairly assume the author had accurate information. Without attempting to repeat my 4935 previous estimate of Wau Bun, I would say the volume is inaccurate in many respects as to detail, particularly the portion of the volume dealing with the Chicago massacre is probably more inaccurate and less worthy of credence than other portions of the volume. Some things in Wau Bun are evidently true; others I seen no reason to dispute. Have indicated that practically all others who had estimated the work or made use of it, give a somewhat different estimate of it than I was inclined to do. I would say in general that 4936 those statements based on matters within Mrs. Kinzie's personal observations and those which were of general knowledge, and which, therefore, she might have been expected to have accurate information of, would be more likely to be credible than some other sorts of statements I might indicate. Would prefer to give judgment on individual statement. In view of circumstances that accompany it. As to the manner in which Kinzie, Senior, got his furs and peltries to Chicago from his trading posts, transcript 3698 and 3699 (Abst., 1402-1403), would consider that is one of the 4937 type of facts concerning which Mrs. Kinzie might well have been informed, and which she would be likely to have stated correctly. Will say, however, that any statements in Mrs. Kinzie's book of very great importance ought to be verified if one is going to rely on it.

As to whether I did rely on it will say I explained some time ago why I used this statement and in what way I used it to show that there were other ways to carry on the fur trade in this region than by using canoes on the Desplaines river.

Hubbard makes clear that point, and this reference in Mrs. Kinzie's book suggests another; I believe I have indicated now in these answers to what extent I relied on Mrs. Kinzie.

As counsel states he wants to know whether I actually rely on that statement as being a true statement, I would say I have indicated that at the time I used that statement that it was one of the statements in the book that I would suppose worthy of credence; but also if it is a matter of any great importance it would then be properly subject to verification. It is suggestive as a line of evidence certainly, and to that extent I have considered it worth citing in connection with my argument. Counsel thereupon stated, "You cited 4938 other portions of Wau Bun for the purpose of showing, as you stated it, as I understood, that certain statements of Keating's contradict known facts." Whereupon witness replied, "I have a recollection which may not be the same thing as counsel's recollection, so that if we had a specific reference there would be no error arise on that score. I suppose counsel refers to the matter of raising crops here at Chicago.

Q. I think so.

A. If so, I cited certain statements along that line from Wau Bun.

Q. You accepted those statements as correct?

A. I cited them along with a large number of other statements of similar purport going to establish the general proposition that corn and other things could be raised and were raised at Chicago in that period, as tending to overthrow Keating's assertion to the contrary. Would hardly waste the time of court in reading a dozen or more similar references if had been satisfied with the certainty of a single reference.

4939 Would say in that connection with reference to that matter, as I just said with reference to the carrying on of the fur trade, it is a statement of a general condition concerning which she would be less likely to go astray than in some other statements in the book. I see no evidence of prejudice involved in making this statement. I do think Mrs. Kinzie used her language in rather a loose fashion. You cannot expect to rely on a statement of hers in quite the way we would the statement of a reputable or noted historian.

Being asked to assume a statement made by a writer of history in reference to something done by a particular individual whose name is given; that the person so named was

alive and living in the same town with the author at the time the history was written; that such town was a small one with a population of about three thousand; that the history was a local one of that town and that the specific incident in question had occurred less than twenty years before the writing of the history; as to whether or not I would as a historian

accept that statement as reliable in the absence of other 4940 evidence, would say it would depend entirely upon the statement and the circumstances which accompanied it.

Would ask counsel to put in the further assumption that the individual had a suitable opportunity to correct or deny the statement and failed to do so.

Q. I will assume that the person had some opportunity; the history was written and circulated as histories are, and so far as we know it has never been corrected by the individual.

A. It would be quite important to assume that the individual would have a personal or direct interest in correcting it.

Q. We don't know anything about that; all we know is that the individual was alive.

A. The statement might be correct and it might not. 4941 I would indicate that the individual might not have had an opportunity to deny the statement; may have had an opportunity, but no interest in denying or correcting it.

Q. I say, assume that these facts which I have stated, coupled with the additional assumption that you suggested, namely, that the individual named was alive, and that the history was circulated and that we know nothing more about it; assume that those are all the facts that you can learn, what would you do as a historian? Would you accept such a statement or reject it?

A. I might not necessarily do either. I might accept it tentatively.

Q. Then such facts would be insufficient in your judgment as a basis for a conclusion as to whether the statement was to be accepted or rejected, is that right?

A. I can give counsel a case in point if he cares to have me.

Q. No, I want you to answer my question.

A. It would depend on the circumstances entirely of the case.

Mr. CORNEAU. I move to strike the answer out. Answer my question. Read the question to him, Mr. Commissioner? (Question read.)

A. I showed counsel the other day, or endeavored to, 4942 perhaps I did not succeed, that the large, if not the major part of the work of a historian consists in applying his method or principles; if counsel prefers that term, to the specific case in hand; that he does not deal with abstract propositions, but he is always dealing with specific propositions. Now I have answered, that in the case he states, the facts might establish it or might not establish it, and have offered to supply an illustration if counsel cares to have me.

Mr. CORNEAU. I do not. I move to strike out the answer as not responsive, and I ask you to state whether or not, if the facts I have suggested were all the facts you could obtain with reference to a particular situation, or citation found in a historical work, you would regard those facts as sufficient on which to arrive at any conclusion with respect to it?

A. I will state that I might regard them as insufficient or I might not, depending on the citation.

Q. Well now what for example?

A. If counsel will state a situation, perhaps I can answer.

Q. I have suggested a situation. What other facts would you need to enable you to come to a conclusion?

A. One condition I have already suggested would be whether the individual had an opportunity to deny the statement or correct it or not.

4943 Q. And unless you could find that out you would not be able to arrive at a conclusion, is that right?

A. I might not be able to arrive at a certainty.

Q. I did not ask you that.

A. You might draw an inference or state the probabilities or state a conclusion and the conclusion would fall short of certainty. Perhaps the facts might be such that you might say that the proposition was established. That is to say, you would have other knowledge that you would bring to bear.

Q. Supposing that those facts were all that appeared; would you be prepared to say that the statement was untrue?

A. Certainly not, unless it seemed evidently untrue or improbable.

Referring to Drown's History of Peoria, transcript 301 and 302 (Abst., 138), he recounts a specific incident of the shipment of provisions by John Hamlin up the Illinois and Desplaines in keel or Durham boats, a keel boat on the Illinois and a Durham on the Desplaines in 1825. Do not happen to

know whether John Hamlin was living in Peoria at the time this history was written.

4945 On page 301 it states: "Another of our old pioneer citizens who is still with us, Mr. John Hamlin." In one sense the book may be termed a local history. It was an almanac also. Am not certain as to the population of Peoria in 1850; not a very large town probably. Drown's History was published in 1850, about 25 years after the incident.

4946 I do not think it is fair to presume that at that time there were doubtless many people living in Peoria who would recall that incident had it occurred. Twenty-five years is a considerable time, and there were hardly any people in Peoria in 1825. I suppose John Hamlin would remember it assuming he had the average memory. My opinion as to the statement in Drown's History about the ascending of the keel boats and Durham boats up the Kankakee and Desplaines with provisions is that what we commonly denominate a "fish story." Since the line of questioning with which counsel preceded this last question, evidently was intended to have

4947 a bearing on the estimate placed on Drown's, will shape my answer with reference to that fact. This book purports to be a record and historical review of Peoria, and an almanac for 1851, and business directory of the city. Evidently not a serious historical work. It is a tiny volume, paper covered, with advertisements on the back cover, a large number of them at the close of the reading matter proper. Commission merchant, hats and caps, boots and shoes, drugs and medicines, etc.

I call attention to these as indicating the general appearance of the book, and some of the things that immediately arouse the suspicion of the historian before he has begun to read the historical part at all. Turning to the introduction, he will not have that suspicion jolted very severely, it seems to me. Coming to the particular statement to which counsel has called my attention, it deals with facts, or supposed facts, which such reading as I have made of the literature of this period has not corroborated; and I consider that it is extremely improbable that John Hamlin would be exporting—this is given evidently as a continued or long

4948 continued procedure, for it is stated that he had erected a warehouse and that he used keel boats, etc.

Q. Was he not the agent of the American Fur Company there?

Mr. SCOTT. He is talking about the warehouse at the Kankakee.

The WITNESS (continuing): That he was exporting pork and beans to Chicago in this way, because the character of the Desplaines river is such that it would be extremely improbable that it would be profitable commercial operation. We know as a matter of fact, from many other sources they did not use the Desplaines in that way in that period, but that they would come up the Illinois in boats as far as practicable, and then take to the stage or wagon or other means of transportation, and sometimes afoot to get across the Chicago 4949 cago in 1825 and later. There is a fall in the Desplaines river of 90 feet in 60 miles above the Lyons dam; at Riverside there is a rock barrier where there is a fourteen foot descent in three miles; below Lemont there is a descent of 90 feet in a distance of 25 miles. Am not certain whether this 25 miles applies wholly to the Desplaines or is projected along the Illinois below the mouth; at any rate, of this descent there is a 76 foot fall in a distance of approximately ten miles between Romeo and Joliet. It seems to me I have gone far enough in my answer to indicate my reasons for not seriously considering Drown's proposition. I do not know what a Durham boat was. As to whether this data which I just gave here, was suggested for the purpose of showing that the Desplaines river could not be used with boats of small draught, I would say it was not suggested for any particular purpose except to describe the geology of the region as I understand it. Should think if the river was of such a character as that and other sources we have had at our disposal 4950 posal in the case indicates, and if it were also a fact that from the time when the country was settled generally by the whites, there was every reason for desiring a water communication between the head of the Illinois or the mouth of the Desplaines and Chicago, that they sought and employed other means of communication, and if Drown's book is of such a character as I have briefly indicated, if the story is not corroborated so far as I have been able to discover, that is sufficient to justify one in rejecting or omitting to attach any particular importance to the statement.

4951 I got the data about the falls in the river and so on from the Geological Atlas of the United States, Chicago folio, Department of the Interior, U. S. Geological Survey, Charles D. Wolcott, Director. The volume is in the Crearar Library.

The fact that John Hamlin has not denied this statement or that such denial has not been called to my attention, would not at all cause me to suppose the statement was true. Hamlin may not have cared to deny it; if he cared to, he may not have had the means of doing so in such a way as we 4952 would have it preserved to us. To my mind the fact that Hamlin was living there in 1850 or 1851 does not prove that the statement is true or valid. When I say that is a fish story, as to whether I think that Mr. Drown simply manufactured it out of his own head, I would say would not undertake to give the facts as to the origin of the story. I think it is evidently invalid. I understand that the 4953 term "fish story" is used to apply to stories told about fishes, and in a broader way about other things, where the element of little regard for the actual facts enters into the composition of the stories.

4954 Q. Is it your opinion that when Robert Dickson spoke in this passage that was read to you at page 3780 of the record (Abst., 1432), of the communication between Mackinac and the Mississippi by way of Chicago, that he did not refer to the Illinois river route?

A. There is no positive statement in the passage; I suppose he had in mind the Illinois river route.

As to my reason for saying that passage throws no light on the use of the Desplaines, I read from 12 Wisconsin Historical Society Collection, page 134:

"The communication between Machinac and the Mississippi is carried on by two routes, the one by Chicago, the other by the Fox and Ouisconsin rivers, the latter is preferred on account of the shortness of the carrying place."

4955 I think it a reasonable deduction from this statement that there was travel between the Mississippi and Lake Michigan by way of the Illinois river, or, rather, I would say that I think it is a reasonable deduction or inference from this statement that such was the case. It does not say anything whatever about the Desplaines river, and the inference that we must draw as to the use which was made of the Desplaines, if any, or of that portion of the Illinois, to put it in another way, will necessarily have to be drawn from or based upon our knowledge of the way this portion of the route was actually used in such a period.

I suppose a longer statement, at 3780 (Abst., 1432) of the record, would perhaps have been in order and

as a part of my answer now I will proceed to make that addition. I have shown somewhere else in the record that I think it a reasonable inference that in the case of travel between Lake Michigan and the Mississippi by way of the Illinois river, assuming that it was practicable to use the Desplaines, and that the conveyances and desires of the travelers were such that they could or wished to see the Desplaines, they would do so. That is to say, that we have here a general statement that communication between Mackinac and the Mississippi is carried on by two routes, of which the Fox-Wisconsin is the preferred route. We have nothing further to guide us and I have shown what might perhaps be inferred or deduced as to the use of the Desplaines from that statement; not simply from 4956 that statement but from that statement in conjunction with what knowledge I happen to have of the whole subject.

As to whether the difficulties encountered on the Fox-Wisconsin route were very much the same in character as those encountered on the Chicago-Desplaines, speaking especially with reference to my geological statement of a while ago as to rapids, I would say that without pretending to have made any very careful study of the Fox-Wisconsin route, I have of course seen allusions to it and I have read at least one narrative of a passage along that route. I think others also, but I have one in mind. I would say that I do not understand that the Fox-Wisconsin passage can fairly be said to be similar to the Chicago-Desplaines passage or route. One passage I had in mind is the passage in Waubun. As to whether they encountered rapids on the Fox-Wisconsin route, stating my impression I believe there were falls and perhaps rapids. I would have to look up the details if counsel wishes me to describe them.

4957 It is stated in this passage of Dickson that at the Falls of the Fox there is a portage of three-quarters of a mile. Evidently there were falls, for this appears to be unconscious testimony to that effect.

Whereupon pursuant to request of complainant's counsel, the witness read from the 1856 edition of Wau-Bun, page 50, as follows (reading):

"The Kakalin is a rapid of the Fox river, sufficiently important to make the portage of the heavy lading of a boat necessary; the boat itself being poled or dragged up with cords against the current. It is one of a series

of rapids and chutes, or falls, which occur between this point and Lake Winnebago, twenty miles above.

The next morning, after breakfast, we took leave of our hosts, and prepared to pursue our journey. The bourgeois, from an early hour, had been occupied in superintending his men in getting the boat and its loading over the Kakalin. As the late rains had made the paths through the woods and along the banks of the river somewhat muddy and uncomfortable for walking, I was
4958 put into an ox-cart, to be jolted over the unequal road; saluting, impartially, all the stumps and stones that lay in our way, the only means of avoiding which seemed to be, when the little, thick-headed Frenchman, our conductor, bethought him of suddenly guiding his cattle into a projecting tree or thorn-bush to the great detriment, not only of my strawbonnet, but of my very eyes."

(Reading pages 52 to 54):

"It was a hard pull for the men up the rapids. Wish-tay-yun, whose clear, sonorous voice was the bugle of the party, shouted and whooped—each one answered with a chorus, and a still more vigorous effort. By-and-by the boat would become firmly set between two huge stones—

Whoop la! whoop! whoop!

Another pull, and another, straining every nerve—in vain.

'She will not budge!'

'Men, overboard!' and instantly every power is over the side and into the water.

By pulling, pushing, and tugging, the boat is at length released from her position, and the men walk along beside her, helping and guiding her, until they reach a space of comparatively smooth water, when they again take their seats and their oars.

4959 It will be readily imagined that there were few songs this day, but very frequent *pipes*, to refresh the poor fellows after such an arduous service.

It was altogether a new spectacle to me. In fact, I had hardly ever before been called upon to witness severe bodily exertion, and my sympathies and sensibilities were, for this reason, the more enlisted on the occasion. It seemed a sufficient hardship to have to labor in this violent manner; but to walk in cold water up to their

waists, and then to sit down in their soaking garments without going near a fire! Poor men! This was too much to be borne! What then was my consternation to see my husband, who, shortly after our noon-tide meal, has surprised me by making his appearance in a pair of duck trowsers and light jacket, at the first cry of 'fast, again!' spring over into the water with the men, and 'bear a hand' throughout the remainder of the day."

4960 (Reading, page 54):

"When he returned on board it was to take the care of a poor, delicate-looking boy, one of the company of soldiers, who from the first had suffered with bleeding at the nose on every unusual exertion."

(Continuing reading):

"With all our tugging and toiling we had accomplished but thirteen miles since leaving the Kakalin, and it was already late when we arrived in view of the 'Grande Chute' near which we were to encamp.

We had passed the 'Little Chute' (the spot where the Town of Appleton now stands) without any farther observation than that it required a vast deal of extra exertion to buffet with the rushing stream, and come off, as we did, victorious."

Motion by defendant's counsel to strike out excerpts from Wau-Bun just read by the witness.

4961 The WITNESS (continuing): Referring to my conclusions in reference to Du Pratz, transcript 3784 (Abst., 1433) Du Pratz's statement is that there is a river which is evidently the Illinois, and by this river the first travelers came from Canada to the Mississippi, and such as come from Canada and have business on the Illinois pass that way yet. I said at transcript 3784 that sometimes they came by way of Chicago and over to the Illinois and sometimes by way
4962 of the St. Joseph and the Kankakee. I said, transcript 3784 (reading):

"All that Du Pratz says is that there was travel between Canada and Mississippi by way of the Illinois."

Q. Oh, well, if we are going to quibble about it; what is your opinion? Did he refer to the Illinois-Desplaines in your judgment, or did he refer to the St. Joseph-Kankakee in your judgment, or did he refer to both, or don't you have any opinion on the subject?

A. My judgment is that he may not have known enough

about the geography of this country to have referred to either of these routes in detail, or to have known in detail as to either of these routes; but reading this passage in the light of the present geographical knowledge of this region, I might assume to apply that to these two references, which is about in effect what I did in this testimony.

Mr. CORNEAU. I move to strike that answer out. Now, will you read the question again.

A. I submit that I have answered the question.

Mr. SCOTT. I submit that the witness has stated fully 4963 and clearly an answer directly to that question.

Q. Will you answer now?

(Question read.)

A. I have answered it.

Q. What is that answer?

A. I said that I submit that I have answered the question.

Q. All right, we will let it go at that. Now, refer to the Dupratz map please. Do you find there indicated a route apparently by way of Chicago possibly the Chicago river or possibly the Calumet river and the Desplaines river and the Illinois river?

A. Upon the map?

Q. Yes.

A. I see none.

Q. Does that help you any in determining what route Dupratz was referring to in that passage?

A. As I pointed out a few moments ago it is evident from the text, and now since counsel has called my attention to the map I will say that it is evident also from the map that Dupratz's knowledge of the region geographically speaking was pretty hazy.

Mr. CORNEAU. I move to strike that part out as not responsive.

4964 The WITNESS. It appears from the map that the river is drawn flowing apparently into Lake Michigan near southwestern corner, and united (that is the interpretation I put on the map), with another river flowing the opposite direction, which I presume may fairly be taken to mean the modern Desplaines. The representation is obviously very inaccurate.

On closer examination would amend last statement by saying, there is a river which flows into southwestern corner of Lake Michigan and the indication "carrying place," seems to connect this with a stream appearing to flow in the other

direction, which I take to be the modern Desplaines. Would interpret the map to mean that the map maker intended to represent the carrying place in that way. The words "carrying place" are close to that point.

4965 Would suppose that one who drew map, if he had in mind statement be made at that time, was referring to a route by way either of the Chicago or Calumet, and the Desplaines-Illinois. Would be a fair construction to put upon passage.

Speaking generally would say secondary evidence is that which is not a first hand statement. Strictly or technically it might not be secondary; it may be third or fourth, or even further removed. Ordinarily one uses term to cover statements which are not first hand.

By secondary I mean statements containing information which purports to have originated on the authority of others.

4966 At transcript 3788 (Abst., 1435) I said:

"Evans describes the Illinois territory generally. It does not appear from his account what parts he went through, or that he went up the Illinois river.
* * * I would therefore regard his statement as a secondary one."

By this I mean I regard his statement as one made not as a result of direct personal observation. Charlevoix's statement was a secondary statement; and Evans I assumed at this place in the record, is a secondary statement. Would not say, however, that the two are the same or of equal validity.

4967 As to how I would regard or whether I would regard Lahontan's statement as secondary, it would depend on fact whether or not Lahontan came through the Illinois country. It is my opinion that proposition that he did is not satisfactorily established. There is a general opinion among historians, or on part of many historians, that he himself did not make the trip counsel refers to. From the study I have made of the subject I see no reason to dissent from the general opinion. Of course, there are possibilities, which if counsel wishes I can go into.

It is my understanding that the Lahontan map of the Desplaines region should be put in the same class as his account.

I am not absolutely certain at this moment.

4968 At transcript 4274 (Abst., 1613) I stated (reading):

"Concerning my third group, the maps, I shall com-

ment briefly only upon the two subdivisions in order. First, those made by explorers. These alone would rank in the strictest sense as first grade sources comparable to the oral accounts of explorers, in so far as a map can be understood and legitimately interpreted. Of such maps I have in mind three: Joliet's, Hennepin's and Lahontan's."

Would say Lahontan's map would stand on same basis as the book. If he was not down here certainly he did not draw the map from personal observation.

At transcript 4277 I refer to the other place where I discussed the map.

4969 By way of explanation at this point, I was making a distinction between maps drawn by people who have never come to America, and those drawn by explorers who have toured more or less through America; so I used the word explorers, it being fairly proper to regard Lahontan as such. If there is any impropriety in including Lahontan at this point (Trans., 4274; Abst., 1613), I would be glad to have counsel point it out.

As opposed to map makers who never came to America at all, should say Lahontan might be considered a first grade source, but if the question is whether he went over this region; assuming that he did not, then certainly he would not be regarded as first grade source. Meaning by first grade source, "based on personal observation."

Q. Take Hutchin's map, and I think there were some
4970 others, made by men who had been in this country and traveled over it. They were not explorers. I was trying to see if there was any reason applicable to them which would not apply to Lahontan?

A. As I pointed out, was drawing a distinction between
4971 tween men who had been in America and traveled there, and men who had not.

It is proper to call attention at this point to the possibility that Lahontan had been over this route.

Concerning my conclusions as to Forsyth, transcript pages 3791 and 3792 (Abst., 1436), I would suppose that the Indians would make what seemed to be the easiest carriage possible from Chicago to the Illinois river. If the carriage could be most easily made by using river so far as usable, they would doubtless do it I suppose. If it was easier to carry the boats all the way or straight across they would doubtless do that.

4972 The passage undoubtedly speaks of Indians who might come down with canoes prepared to use the water. Assuming that there was water communication between Lake Michigan and the Illinois, would suppose they would follow that water communication. Do not know that I would say anything further as to connecting these two documents. I have put into the record what I knew about the itinerary introduced, the itinerary from Detroit to the Illinois by way of the Kankakee, at transcript 3832 (Abst., 1451). The 4973 conclusion might be better stated than is done there.

Would bring to bear on that document such other historical knowledge as I happen to have concerning the matter. Document alone not necessarily shows it was well known route; it would simply show it was a route taken by itself. The title is "A road from Detroit to the Illinois." Then follows details as to distances, and so forth.

It would seem that the author must have had in mind a route or passage from one place to the other. It was doubtless traveled somewhat, or this table would hardly have been made out, I suppose. Have shown the extent to which document is worthy of credence and acceptance.

4974 Referring to Flint and McLaughlin's conclusion, transcript 785 (Abst., 327), that Flint's statement indicates the use of the Chicago-Desplaines route as an avenue of commerce. Waiving the question of extent of such use, would not differ with proposition that if five ton boats went along this route it was used by those five ton boats, and evidently it would be for commercial purposes.

McLaughlin says:

"I think, taken in connection with the whole passage it indicates to me the use of the Chicago-Desplaines route as an avenue of commerce."

Waiving all points as to size of boats and frequency or extent of use of such boats or passage of such boats over this route, should see no reason to reject the proposition that 4975 the boats went over the route. If that constitutes an avenue of commerce then have no reason for disagreeing with McLaughlin, subject to those qualifications.

Q. Now do you or do you not differ with Professor McLaughlin?

Objection; question not competent.

A. I answered the question a moment ago. Would not care to answer yes or no; should consider it misleading.

Q. You find difficulty in making up your mind as to what an avenue of commerce means, do you?

Objection; same.

A. No particular difficulty on that point in my own mind.

The difficulty is as to whether Professor McLaughlin would use the phrase "avenue of commerce" applied to this situation restricted as I would restrict it myself, or qualify it as I would qualify it. I should suppose an avenue of commerce is an avenue along which commerce is carried.

Q. You would doubt that Desplaines river is such an avenue.

A. I doubt whether Professor McLaughlin had in mind the sort of thing I had.

Motion to strike out.

Q. Taking your own definition of an avenue of commerce do you doubt that the Desplaines river was such an avenue?

Objection; incompetent, irrelevant and immaterial.

A. Have spent considerable time in attempting to develop what I consider the nature of the use of the Desplaines. Will go into that question if counsel desires. Would not care to answer the question yes or no, connecting it as counsel does with McLaughlin's statement on transcript 785 (Abst., 327).

4977 In the terminology of city highways we commonly distinguish between an avenue and certain other streets. I suppose Professor McLaughlin in using the phrase "avenue of commerce" had in mind to answer that this was a general highway of commerce or something of that sort. Probably he would be more competent to explain this than myself.

The point where I think I differ with McLaughlin, is that I do not suppose that the Desplaines route, or this passage at any rate, in light of my general knowledge of subject, indicates that Desplaines route was used as an avenue of commerce commonly and generally. Would say that in making this assumption will assume that counsel means Desplaines river used by boats in the water. Have had that qualification in mind in making my answer.

4979 At transcript page 3855 (Abst., 1460), I said:

"For example, as shown by the statements in Schoolcraft in 1821; of Tousey in 1822; of Kennedy in 1773; and by the experience of the men who constructed the Illinois and Michigan canal, they found such statement

as this of Flint as to the ease of water communication between the Illinois and Lake Michigan to be untrue, just as Schoolcraft and others had indicated. I conclude therefore that Flint was in all probability misled by this prevalent but erroneous impression."

When I said "they found such statements as this
4980 of Flint as to the ease, and so on, I had in mind a general statement or idea as to the ease of constructing water communication by canal between Chicago and the Illinois or Desplaines rivers. I cited Flint by way of illustration there. Flint's history and geography of the Mississippi valley, volume one, page 323. "By a moderate amount of labor and expense, this river might be united with the Chicago of Lake Michigan." In that answer I had in mind the statement frequently retailed at that time as to the ease with
4981 which the Chicago and Desplaines could be united by canal. Evidently there was a general misconception at the time this statement of Flints was written as to the amount of labor and expense that would be entailed. When they built the canal the expense was greater than they had supposed prior thereto. I believe they were forced to change their plans because they found they had miscalculated in certain essential respects. I am not in entire ignorance of the engineering details and difficulties of the Illinois and Michigan canal, but I have not studied that part of the work so as to feel justified in passing a definite opinion upon it.

4982 As to whether I know in a general way that there has always been a discussion among engineers as to the relative possibility, or perhaps desirability of using natural waterways or independent canals, I would say Schoolcraft says something about succedaneous canalling, and I believed expressed the opinion that that sort of work is not generally practicable; have not looked up the meaning of word succedaneous. Have an impression as to what it might mean. I have in mind the passage in Schoolcraft's travels in the central portion of the Mississippi valley, which reads:

"But it may be questioned, whether this species of
succedaneous canalling is calculated to answer a valuable purpose. We believe experience has proved it
4983 cheaper in the end, to open an entire new channel, than to improve the natural bed of a shallow and rapid or one that is subject to great and sudden fluctuations from vernal or autumnal freshets.

This appears to be the proper construction applicable

to that noble idea of the celebrated Brindley, 'that streams were only made to feed canals'—a principle which, so far as we are capable of judging, appears to be adopted by modern engineers, and has been pretty rigidly applied in the instance of the Erie Canal."

In Flint's recollections, page 106, occurs this statement:

"Consider that the lakes are wedded to the ocean by the New York canal. The Illinois will shortly be with Chicago and Michigan; for it is, for a little while in the spring, partially so by nature."

From a general discussion, and what I know of the general idea in the air at that period with reference to
4984 the projected canal, Flint was speaking of the same sort of thing that others were commonly speaking of in that period, about 1826. The first edition of Flint was published in 1828; the second in 1832. Whatever the second contained was doubtless based on the same sort of knowledge that the statements of the first were.

4986 My attention is directed to Schoolcraft's travels, page 332, passage which reads:

"This fact is sufficient to show the error of those who have supposed, that a canal of only eight or ten miles would be necessary to perfect the navigation between Lake Michigan and the Illinois. A canal of this length would indeed perfect the communication, which already exists at certain seasons between Chicago creek and the Desplaines, but must fall far short of the grand purpose."

4987 I would judge from this sentence that Schoolcraft states by implication at least that there already exists at certain seasons a water communication between Chicago creek and the Desplaines. I should call that a positive statement. Do not see that he says anything about commerce and travel and so forth. He says there is a communication. I take it he means a water communication between two rivers, or one he calls a creek.

4988 As to whether by water communication he means a water that could be used for trade and travel, cannot answer that, considering this one sentence alone.

4989 The preceding sentence points out the error of those who supposed a canal of only eight or ten miles would be necessary to perfect navigation between Lake Michigan and the Illinois. Evidently he is talking about a canal to perfect that navigation. He then goes on with the sentence which

has been read to the effect that there is at the present time at certain seasons communication, which I take to be water communication between Chicago creek and the Desplaines, evidently not at all times, and that a canal would make perfect that communication. That is to say, would make a water communication between the two at all times, have no doubt he was thinking of and in a way speaking of a route for commerce between Lake Michigan and the Illinois river.

4990 As to whether I therefore construe that passage in the light of other data which I have taken into consideration as showing that Schoolcraft considered that the Desplaines river was, at certain seasons at that time, being used as a route for travel and commerce, I would say that it was susceptible of such use.

As to whether I think that the construction above suggested would be an unfair construction, I would say in view of the whole passage, for he points out above that he has met traders who are portaging from Chicago creek, and think they can enter the Illinois at Mount Joliet. I suppose it would be a reasonable inference that those traders would have preferred to float their boats in the water from Chicago creek to the Illinois river rather than hauling them across. Presumably then the Desplaines was used, basing my answer upon Schoolcraft, at certain seasons by traders. I understand that this is in harmony with such accounts as Hubbard's and certain others have left us as to such use.

As to whether I would not infer also from that same
4991 passage that the Desplaines was used without portage at all at other seasons than the summer time of which he was speaking when he mentioned those traders, I would not care to undertake to infer at just what seasons it was used, that is to say, speaking in months or the cardinal seasons of the year. It would probably be a safe inference that it may have been used when the water communication was perfect. Supposing there was a trader there who desired to use it, he doubtless would do so.

As to whether I think that Schoolcraft meant to say there that during those months it was used, I would reply that I should think that Mr. Schoolcraft would have said whatever he meant to say. He wielded a very facile pen, I judge, from the various books and letters he has left us.

Q. Then you do not think that is what he did say according to the fair construction of the language used?

A. What he did say appears in the volume. Shall I read it?

Q. No, it has been read two or three times. I mean the fair construction of that language.

Question objected to on the ground that it does not require the interpretation of a historian to determine what Schoolcraft said in the passage referred to.

4992 Mr. CORNEAU. I am only asking the witness to do what you repeatedly asked him to do, Mr. Scott, over my objection, and if my objection to the direct evidence should be sustained, no doubt your objection will be sustained.

A. I do not understand that Schoolcraft intended to make any statement as to how frequently or continuously the Desplaines was used; basing my answer on this passage.

Q. Don't you think, however, that he intended to state that it was used?

A. I believe I have made as clear as I possibly can the interpretation I would put upon the passage, as to that use.

Motion to strike the answer out as not responsive.

Question reread.

Objected to for the reasons above and the further objection that the witness answered the question.

4993 I see no statement here in the passage to the effect that the Desplaines was used. There were traders going across the plains that were evidently eager to get into the water as soon as they could. They gave Schoolcraft information that it would be practicable to enter the Illinois, obviously the modern Desplaines at Mt. Joliet. I would
4994 have supposed that they would have entered the Desplaines as much earlier as it was practicable to do, and if it was practicable to sail or float their boats all the way, they would have done so. If as Schoolcraft states there were certain seasons when communication was perfect between the two rivers, if there were any traders who wanted to use the Desplaines, I would suppose they would naturally have used it. I do not understand that Schoolcraft makes a statement here as to the frequency, continuity or extent of such use.

Pointing out the language in Tousey's statement heretofore referred to by me, at transcript page 3855 (Abst., 1460), which conflicts with Flint, I read from Schoolcraft's personal memoirs, page 179:

"The reading of books and looking at maps make a fugitive impression on the mind, compared to the

ocular view and examination of a country, which make it seem as though we cannot obtain valuable information, or money to serve a valuable purpose, without great personal labor, fatigue, and often danger. This was much verified to my satisfaction, from a view of
4995 the great western lakes; the interesting position where you are—Mackinaw, Green Bay, and the fine country between Green Bay and Chicago, and Chicago itself, and the whole country, between the latter place and St. Louis."

The following paragraph he observes that, without actually traversing the country, he refers to, one could hardly believe the advantages, and promise which it affords to civilized men (reading page 180):

"I regard Green Bay, at the mouth of Fox River, and Chicago, as two very important positions, particularly the latter. For many years I have felt a most anxious desire to see the country between Chicago and the Illinois (river) where it has generally been, ignorantly supposed that only a small sum would be wanting to open a communication between them. By traveling on horseback through the country, and down the Illinois, I have conceived a different and more exalted opinion of this communication, and of the country, than I had before, while I am convinced that it will be attended with a much greater expense to open it than I had supposed."

4996 Flint states that appropriations have already been made by the state for the canal. I am not certain that
4997 an appropriation for the construction of the canal had been made prior to the publication of this book. Without looking it up, I cannot answer in detail as to the original plan for the Illinois and Michigan Canal, where it was to begin and end. My understanding is that the idea early in the nineteenth century was that the canal might be constructed very cheaply and paid for by grants of land
4998 along the borders of the canal. Have in mind one estimate which puts it at something like \$90,000. Am not prepared to state how early in the course of the investigation of the subject this estimate was made. Long's report evidently was talking of a short canal.

Q. Do you think that Long, in speaking of a short canal was referring to a canal of the same sort, that is a canal useable for the same purpose as that about which Schoolcraft

was speaking when he said that a canal of eight or ten miles in length would fall far short of the grand purpose?

Objection; incompetent, irrelevant and immaterial.

A. Long and Schoolcraft were speaking about perfecting the navigation between Lake Michigan and the Illinois Schoolcraft thought to accomplish this a considerable canal must be constructed; Long thought that all that would be required was to construct a canal between the Chicago 4999 and Desplaines river, and improve the bed of the Desplaines by sluices in two or three places as pointed out in the report. Long's report proposed canals and roads (reading):

5000 "A canal uniting the waters of the Illinois, with those of Lake Michigan, may be considered the first in importance of any in this quarter of the country, and, at the same time, the construction of it would be attended with very little expense, compared with the magnitude of the object. The water course, which is already opened between the River Desplaines and the Chicago river, needs but little more excavation to render it sufficiently capacious for all the purposes of a canal. It may be supplied with water at all times of the year, by constructing a dam of moderate height across the Desplaines, which would give the water of that river a sufficient elevation to supply a canal extending from one river to the other. It would be necessary also, to construct locks at the extremities of the canal, that communicating with Chicago river, being calculated to elevate about six feet, and that communicating with the Desplaines, about four feet.

To render the Desplaines and Illinois navigable for small boats and flats requiring but a small drought of water, nothing more is necessary than the construction of sluices, in a few places where there are ripples of a sufficient width to admit the boats to pass through them. This may be effected by clearing away the loose stones from the bottom, and forming banks riveted with stone two or three feet high, on each side of the sluice. Thus, a water communication between the Illinois and Lake Michigan may be kept open at all times sufficient to answer all the purposes for which a canal will be wanted, for many years to come. A canal uniting the St. Joseph of the lake with the Illinois, by way of the Kankakee, may be constructed also in a similar manner, and with

great facility, except that the distance by this route is considerably greater."

5001 Q. As throwing light on what he speaks of as the channel already existing at that time, etc., read the preceding paragraph, or this paragraph on the preceding page (indicating):

A. (Reading):

"In the flat prairie, above mentioned, is a small lake about 5 miles in length, and from 6 to 30 or 40 yards in width, communicating both with the river Desplaines and Chicago river, by means of a kind of canal, which has been made partly by the current of the water, and partly by the French and Indians, for the purpose of getting their boats across in that direction, in times of high water. The distance from the river Desplaines to Chicago river, by this water course, is about 9 miles; through the greater part of which, there is more or less water, so that the portage is seldom more than 3 miles in the driest season; but in a wet season, boats pass and repass with facility between the two rivers."

Q. Now, to get back to my question; do you think that when Schoolcraft said what he did about a canal of eight or ten miles length falling far short of the grand purpose, he was referring as the grand purpose, to a canal which would furnish the sort of communication that Long describes in that second paragraph which you read, the paragraph beginning "To render the Desplaines and Illinois navigable, for small boats and flat requiring but a small draught of water," and so on?

Mr. SCOTT. The same objection.

5002 A. My supposition on the whole subject would be somewhat to this effect; that Mr. Long was considerably in error as to the statements he makes here with reference to the Desplaines and the water communication between the Desplaines and the Chicago.

Mr. CORNEAU. I move to strike that out as not responsive.

A. That is, the statement as to the sort of boats by which his water communication would be navigable, is small boats and flats requiring a small draught of water. I understand that Mr. Schoolcraft is calling attention to the nature of this water communication, or proposed water communication between the Chicago and the waters of the Illinois river; that he expressly points out that a canal of only eight or ten miles to perfect the communication such as already exists at

certain seasons between the two rivers, but would fall far short of the grand purpose. Major Long's canal was evidently one between the Desplaines and the Chicago. Such a one I judge as Schoolcraft may have had in mind in this statement to which I have referred. When Schoolcraft refers to the grand purpose I presume he has in mind that such a canal would be inadequate for the purpose of general traffic and trade such as would be called for in this region; 5003 differing with Mr. Long very materially on that point, for Mr. Long said that his canal would answer all the requirements for many years to come.

Counsel for the government thereupon directed the attention of the witness to transcript page 3866 (Abst., 1462), where, counsel said, the witness on direct examination stated that what Hoffman said about the canal was based on Keating, and that the witness inferred from that that Hoffman's account was entitled to the same weight as Keating's account and no more and asked the witness if that was right, whereupon the witness replied:

My inference is, if this may be fairly described as an inference, that Hoffman was here at Chicago in the winter of 1833 or 1834, as the case may be, and that he spent some days here and doubtless conversed with as many people 5004 as he cared to converse with during that time; and doubtless was filled with the prevalent optimistic state of mind of the people of Chicago at that time as to their situation and prospects. Then I compared his statements in note M with the substance of Keating's report, and found them so similar that I concluded that he relied very largely on Keating for the statements that he made. In order, however, to make it perfectly clear what the basis of that conclusion was and what weight it might be entitled to, if any, I proceeded to put the two passages into the record, so that the court can judge for itself as to the validity of my conclusion.

Q. What I want to get at is this: you did not intend to indicate that in your judgment Hoffman relied solely on Keating's account? That was the point about which I was not clear.

A. I believe I have just answered that question.

Q. Now, if you will turn to page 245, or you will find the sentence I guess more conveniently at record page 335 (Abst., 156) of Hoffman's letter, you will find there a sen-

tence, "I had a long conversation this morning, on the subject, with Major H.," and so on. You find that, do you not?

A. Yes, sir.

Q. Just read the sentence, will you please?

A. (Reading):

5005 "I had a long conversation this morning with Major H., the United States engineer, who is engaged in superintending the construction of a pier at this place."

Q. Just continue; I will tell you when to stop.

A. (Reading):

"He was polite enough to sketch the main features of the route with his pencil, in such a manner as to make its feasibility very apparent. The canal would pass for the whole distance through a prairie country, where every production of the field and the garden can be raised with scarcely any toil, and where the most prolific soil in the world requires no other preparation for planting than passing the plough over its bosom. The most effectual mode of making this canal would be to give the lands along its banks to an incorporated company who should construct the work within a certain time. The matter is now merely agitated at elections as a political handle."

The passage read occurs on page 335 following a passage on 334 which counsel for the complainant then asked the witness to read, as follows:

5006 "There is one improvement to be made, however, in this section of the country, which will greatly influence the permanent value of property in Chicago. I allude to a canal from the head of Lake Michigan to the head of steam navigation on the Illinois, the route of which has been long since surveyed. The distance to be overcome is something like ninety miles; and when you remember that the headwaters of the Illinois river within eleven miles of the Chicago River"—

At that point occurs the star referring to the Appendix, note M.

As to whether it is not pretty clear to my mind that the purpose of his reference to Keating at that point is to explain the source of his statement that the headwaters of the Illinois rise within eleven miles of the Chicago river, I would say I should think if that was all he was after it would have been sufficient to have made a much briefer statement than is made in note M. My understanding would be that

he puts in a footnote at this point which may be read in connection with the subject under discussion here.

5007 I do not recall anything in Keating to the effect that boats of eighteen tons have actually passed over the intervening prairie at high water. I suppose that was one of the statements which some enthusiastic citizen of the budding Chicago communicated to Hoffman. Do not recall anything in Keating about the use of pirogues by traders.

I stated at transcript 3884 (Abst., 1468):

"That Keating apparently accepted without question the general but ignorant supposition that only a small sum would be wanting to open communication between the Lakes and the Mississippi."

5008 Do not recall that I based that statement on any particular sentence in Keating. I was discussing the volume. As pertinent thereto I read Keating's expedition to the source of the St. Peters river, page 166, volume one:

"And it is equally apparent that an expenditure trifling in comparison to the importance of the object would again render Lake Michigan a tributary of the Mexican Gulf."

Keating evidently had a small sum in mind, according to the plain import of the language.

Q. Now, what do you mean by a small sum?

Objection; incompetent, irrelevant and immaterial.

5009 A. I call attention to the language on page 167 (reading):

"It is the opinion of those best acquainted with the nature of the country, that the easiest communication would be between the Little Calamieck and some point of the Desplaines, probably below the Portage Road; between these points there is in wet seasons, we understand, a water communication of ten or twelve miles. Of the practicability of the work, and of the sufficiency of a supply of water no doubt can exist. The only difficulty will, we apprehend, be in keeping the communication open after it is once made, as the soil is swampy, and probably will require particular care to oppose the return of the soft mud into the excavations."

I understand it was generally understood in this period that it would be an easy matter comparatively speaking to cut a channel for a canal such as was under contemplation. When they came to cut a channel they found in place of the

material cut being too soft it was too hard, and the expense greater than had been expected.

5010 I suppose Keating has indicated to some extent by the passage read that they could cut a comparatively short distance through soft earth, and in view of the desirability of the water communication, it would require but a comparatively small sum.

See no particular reason to doubt that Hobson may have told Keating that he travelled up the Desplaines and portage in a boat loaded with lead and flour, (Transcript, 296; Abst., 136). I see no reason to doubt the statement (Transcript, 295), where he speaks of an officer of the garrison having come from St. Louis with a load of provisions a few days before. Seeing that he was here in the spring time, that the water was high, probably higher than usual at this season of the year in this vicinity, and in view of what Hubbard and others
5011 have recorded about possibilities of bringing boats up the Desplaines at such seasons, when in such a condition, have no reason to doubt that they may have done so. Whether it was actually done or not is, of course, another matter. My opinion is that the evidence is not sufficient to amount to conclusive proof.

Q. What is sufficient in your judgment, doctor, to prove a historical fact conclusively?

Objected to because the question is incapable of an answer.

Mr. CORNEAU. Now, let us see if the witness says that. You may answer, doctor.

Mr. SCOTT. I think that is what the court will say when he hears the objection. It is impossible without stating what sort of fact, for anyone to say what would be sufficient proof.

The WITNESS. Does counsel wish to make the question more specific, or direct, or detailed?

Mr. CORNEAU. No, not at this time. I may later.

A. I will say that the question seems to me to have no particular sense or meaning. Therefore I would not care to undertake to answer it.

Q. Now, have you any principle upon which you as a historian work when you are determining the credibility of historical facts?

Objected to because the facts have been gone over very thoroughly with this witness on the cross-examination,
5012 as to what his views as to that are, and as to whether

he has any particular principle, such as indicated in the question.

A. If by principle counsel means method, I have been under the impression that I have; but I have already pointed out to counsel that a historian does not as a rule deal with abstract propositions as a mathematician may, but that he deals with specific matters. Therefore, I have pointed out already to the counsel that in trying to answer such questions as these it is usually desirable, if not necessary to have specific cases in view.

Mr. CORNEAU. Then we will take a specific case. What additional investigation would be requisite by you to determine whether or not—and I mean of course to your satisfaction—whether or not these trips, or this trip, whichever it was, occurred?

A. It is counsel's assumption, I believe, that I am not satisfied?

Q. You said the proof was not conclusive. Are you satisfied?

A. As to what?

Q. As to whether or not Hobson or this other officer, or both as the case may be, made the trip spoken of by Keating, or trips.

5013 A. Without passing any opinion as to whether Hobson was the other officer or not, I would say that I have no reason so far as I am concerned, to question the statement. As I said before, it is not given in such a way that we can say the fact or supposed fact is proved. I suppose it would suit counsel's purpose to say that I have no particular intention or reason to question it at this time.

Would say with reference to my criticism of Thwaites conclusion as to Cass' trip, transcript 4003 (Abst., 1516), that "therefore that Dr. Thwaites' conclusion that he used this route as a desirable one is unwarranted," does not state properly what I had in mind in that connection.

5014 Doubtless the route would be a desirable one if it were safer, and he had the desire to inform the people of Chicago of the existence of Indian hostilities. What I had in mind was rather this: that Thwaites drew the conclusion that aside from such special motives as I have indicated, merely as a general or open choice between two possible routes, one by the Fox-Wisconsin and the other by the Illinois-Desplaines, Cass came by this route; and I pointed out at

that place that there were special reasons why Cass should decide against returning by the Mississippi and the Wisconsin, and in favor of returning by the Illinois and Lake Michigan. I indicated two special reasons, I believe, at the time.

As to whether I find anything in them to warrant Cass in choosing the water route by way of the Desplaines in preference to using horses from some place down the Illinois, considering the whole situation, and not basing my answer on these two reasons, I point out that Cass was in a great hurry, possessed means of travel rapidly by canoe with a dozen oars; that he had the canoe, and may or may not have had horses; that it was certain the canoe could be used on Lake Michigan, and he may have felt reasonably clear in view of the season and state of weather, and so forth, that it could be used on the Desplaines, therefore on the whole, that it would be a more expeditious way of returning to continue the journey with the same method of transportation. This explanation does not touch the question whether the other method was available or not.

5016 I believe I made my opinion as to whether Hutchins was based on Kennedy clear in my direct testimony, transcript pages 4027-4030. (Abst., 1525.) I amplify my statement on transcript 4029 (Abst., 1526), "The historian will naturally construe," etc. Those five lines of Hutchins' account of the Illinois and Chicago rivers is followed by two page discussion of the Illinois country, to which is applied the footnote, to see annexed plan, and so forth in 5017 appendix number 1, which is Mr. Patrick Kennedy's journal, so I concluded it is reasonable to construe Hutchins in connection with whatever light may be thrown by Kennedy's journal on the subject. I made no statement that Hutchins' account however long it was, was based on anything Kennedy said. There is no indication further than what I have shown as to the connection between the two. Hutchins gives succinct account of the Illinois and generally a 5018 little later on, as I have shown, refers us to Kennedy's journal, which he also prints.

As to whether in Kennedy's journal there is nothing about the subject matter of this passage which was read to you by Mr. Scott, I would say Kennedy's journal contains some account of the nature of the Illinois river.

To state as far as I can from memory just how much Hutchins had traveled in the country around the great lakes, the

Ohio and the Mississippi valleys prior to the making of his Topographical Description. I would say speaking from memory, Hutchins had been down the Ohio river and I believe had made a survey of the Ohio river; and had 5019 spent some time in the lower Illinois country around the French settlements; had been at Detroit; in general, had spent a number of years in America and as I have already indicated part of that time at least in the Ohio valley and to some extent in the Mississippi valley. If at Detroit, obviously to some extent on the Great Lakes.

Whereupon counsel for complainant read from the preface of Hutchins' Topographical Description, as follows:

"Those parts of the country lying westward of the Allegheny mountain, and upon the rivers Ohio and Mississippi, and upon most of the other rivers; and the lakes (laid down in my map) were done from my own Surveys, and corrected by my own Observations of latitudes, made at different periods preceding, and during all the campaigns of the last war (in several of which I acted as an Engineer) and since in any reconnoitering tours, which I made through various parts of the country, between the years 1764 and 1775.

I have compared my own Observations, and Surveys, respecting the lakes, with those made by Captain Brehm, 5020 of the 60th Regiment of Foot (who was for many years employed as an Engineer in North America) and I find, that they correspond with more exactness than Surveys usually do, which are made by different persons, at different times."

If counsel seeks to establish by this that Hutchins' work is not susceptible of error, would point out that his survey of the Ohio river was something in the neighborhood of 200 miles in error.

Motion to strike out.

By the statement "Respecting the Lakes" I suppose he referred to the Great Lakes. Am not prepared to make a statement that in his map he shows a great deal of information about the region about the southern end of Lake Michigan, that had never appeared on any previous map. I would have to assume that I have examined every previous map, which is obviously an improper assumption.

As to whether, having in view the examination of maps I

have had made in this case, I recall another map which
5021 shows the great Kennomick river and the alignment of it
in that way, would say I looked over quite a number
of maps in this case and I will say I can hardly hazard a
statement as to this since I could scarcely be expected to
keep in mind all of the details and the dates of the maps on
which those details occur. I am entirely unable to answer the
question without looking them over again.

Q. You have no recollection on the subject at the present
time at all?

A. I would say that I am unable without reference to
the maps to place such a matter as that. One looks over many
maps and it is obviously impossible unless he has an unusual
memory for him to say some weeks later or some time later
as the case may be, on just what maps he saw a particular de-
tail which may not have been called to his attention before,
I have seen the Kennomick river referred to on various
maps; I am clear as to that. I would not undertake to place
the dates of the maps or say that I had not seen it on any
map—well, what was that question?

(Previous question read.)

A. I would say then, to fit the answer to that question as
read, that I have seen the great Kennomick river, or at any
rate the Kennomick river referred to on other maps.

As to whether I recall whether they were prior or subse-
quent maps, will say that is the point that I cannot answer
about.

The data I have been referred to by counsel is too indefinite
to establish or negative the proposition that Hutchins had
been in Chicago or around the southern end of Lake Michigan
prior to writing his Topographical Description. Do not under-
stand that this statement in the preface necessarily implies
that Hutchins had himself surveyed all of the lakes, or
5023 all portions of the lakes depicted on the map. As an in-
ference or reasonable deduction, I would suppose the
contrary would be the case. Do not recall having studied
Hutchins' map.

Turning to the preface, I find this statement: "And upon
most of the other rivers." Obviously he had not surveyed all
of the other rivers laid down in the map. I think there is
direct evidence or implication in support of what I drew as
an inference that he had not been over the whole region.

Q. I am correct, in understanding, am I not, that this pas-
sage from Hutchins which was read to you by Mr. Scott, tran-

script 4026 (Abst., 1525), "The Illinois river furnishes a communication with Lake Michigan by the Chicago river
5024 and by two portages between the latter and the Illinois river, the longest of which does not exceed four miles," was not based—and when I say not based, I mean there is nothing on that subject—on anything that Kennedy said in his journal?

Objection; the question has been asked and answered.

A. Answering that, I must interpret counsel's question. If he means there was nothing in Kennedy's Journal on the Illinois, I would say no to that. There is a good deal in Kennedy's Journal. If he means to ask if the information on which he based his statement, I simply was making no statement whatever about that. He may have obtained it from

Kennedy or may have obtained it from another source.
5025 He presents here a topographical description and gives us a very brief statement in reference to the Illinois river and Chicago, and connection between the two. He prints an appendix, containing a fuller account which Kennedy wrote, Whether that appendix was intended for Hutchin's information or that of his readers, is possibly an open question, but I presume the latter.

As to whether I would say he may have gotten the information on which he based his statement, from Kennedy, I would say I was not making an assertion, I was suggesting a possibility.

Q. You said that was a possibility. The statement I had in mind and perhaps you did not understand me, was this:

"The Illinois river furnishes a communication with Lake Michigan by the Chicago river and by two portages between the latter and the Illinois river, the longest of which does not exceed four miles."

Do you find anything in Kennedy's Journal upon which by any possibility that statement could have been based?

A. I think not. Kennedy failed to get to the Desplaines and gives no account of Chicago and the portage.

Q. Mr. Quaife, as a historian, have you any reason to doubt the correctness of this statement made in the work
5026 entitled "Illinois in 1837," and I quote from the record at page 4030 (Abst., 1526):

"About 42 miles above the mouth of this stream is a swamp connecting it with the Chicago river, through which boats of some burden have often been navigated into Lake Michigan."

Objected to as incompetent, irrelevant and immaterial.

A. It would depend entirely upon what the concomitant statements or subjects appended to this or accompanying this are, what the writer may have had in mind by saying "often been navigated into Lake Michigan." That is to say, how long a period, and so forth. What he would consider in view of the length of that period would constitute often. I have no reason to doubt that boats have gone from the Desplaines which I suppose is the river referred to here in this citation to Lake Michigan.

Q. Have you as a historian any reason to doubt this statement in the same work at record page 4031 (Abst., 1526) (reading):

"This route was used by the traders as a medium of communication between the great lakes and the Mississippi from the first discovery of the country by Europeans"?

Objected to as incompetent, irrelevant and immaterial.

A. With the proper interpretation or elaboration or explanation as to this route, I assume in making this answer that this is the Chicago-Desplaines-Illinois route which the citation refers to, and also I assume that "from the first 5027 discovery of the country by Europeans" refers to this portion of the country. I see no reason to question the statement. Explanation must be attached to the statement as to the frequency and character of such use. It should be qualified that the statement cannot be interpreted to mean, or if it does, it is incorrect, that this is the only route, or perhaps even the chief route which was used by traders between the Great Lakes and the Mississippi. I may say then I do not question the proposition that traders in passing from the Great Lakes to the Mississippi and vice versa made some use of the Chicago-Desplaines route. The nature of the use would require details to indicate.

My attention is directed to Imlay, 1797 edition, page 44 (reading):

5029 "After leaving Post St. Vincent, in the route to the Illinois country, you soon fall into those extensive plains which have been described in such glowing colors by Hutchins. This is certainly a beautiful country; and the immense number of deer, elk, and buffalo, which are seen grazing in those natural meadows, renders even

wildness enchanting. The air in this climate is pure, and the almost continual unclouded sky tends not a little to charm the senses, and to render even wildness delightful. The country between Post St. Vincent and Kaskaskies is flat and plain, with little variation. As you ascend the Illinois river the soil grows more fertile, and on either side you find immense forests."

To river is attached a footnote reference which reads:

"The Illinois is a fine, gentle river, navigable to its source for batteaux. Its width is various; in some places it is nearly half a mile, but its general breadth may be considered about 250 yards. The Illinois river furnishes a communication with Lake Michigan by the Chicago river, and by two portages between the latter and the Illinois river, the longest of which is only four miles.—*Hutchins.*"

5030 I understand that Imlay had been in Kentucky. I do not see that this passage shows that he had been in the Illinois country. Would not consider it impossible or improbable that he had been.

5031 Do not think he describes it as though he had been there. He states somewhere in his work that he relied on Charlevoix and Carver and Hutchins and it is evident from this passage here that he has done so to a very considerable extent at least.

Counsel for the government then called the witness' attention to the passage, transcript 4037 (Abst., 1528), reading as follows:

"A great part of it has been described by Charlevoix, Hutchins and Carver. Charlevoix seems to have gone rapidly from Detroit by water the greatest part of the way to New Orleans; Hutchins to have done nearly the same from Pittsburg, down the Ohio, to the Mississippi and up that river to the Illinois; so up that, and from thence to Detroit. He has given a tolerably good account of the Illinois country."

As to whether the sentence, "He has given a tolerably good account of the Illinois country" would tend to indicate that Imlay had to my mind some other information about the Illinois country, would say that I presume a man living in Kentucky would naturally have some knowledge or conception at least as to the character of the Illinois country. If counsel means to ask if this shows that Imlay himself had

been there and seen it, I do not think it indicates that. That is not at all a necessary deduction.

5032 Q. He sort of speaks as though he knew a good deal about it himself, does he not, when he undertakes to say that Hutchins' account was tolerably good?

Mr. SCOTT. Objected to as argumentative.

A. I suppose the volume will show what he says. If counsel is asking for my opinion?

Q. Yes.

A. Or deduction?

Q. Yes.

A. I suppose Mr. Imlay thought he knew something about the Illinois country. I do not conclude that he had been there. That is, I do not think this passage will show one way or another whether he had been there or not. Perhaps I might express an opinion as to the correctness of some description of something in California, or possibly even of China without it following that I had ever been either to California or China.

Q. What is Imlay's standing among historians?

A. I would call counsel's attention to the fact that on page 63 of the 1793 edition of Imlay, he states that he has not had the advantage of traveling this route, the reference being to traveling by the Illinois river direct; that he recommends his correspondent to read Hutchins' book which he says was originally published in English, and so forth. Now, what is the question?

(Question read.)

5033 A. I suppose counsel would mean by that what do I think Imlay's standing is?

Q. Oh, yes.

A. Since it must be obvious that not all historians agree as to any such matter as this; my understanding then is that Imlay is regarded as a valuable source of information for matters pertaining to Kentucky and which came under his observation or which he ought to have known about. Further that he is regarded as having wielded an enthusiastic pen, perhaps I might best make this clear by saying in some such fashion as Mrs. Kinzie had done in her book Wau-Bun, and that his language therefore is properly subject to criticism and examination. I do not understand that Imlay's book has any particular standing whatever with reference to matters other than those which he may be supposed to have been personally cognizant of; and Imlay in his book makes it clear that he

himself relies on others for accounts of those parts of the country which he had not himself visited.

Referring to the reference which I read from the 1793 edition of Imlay as follows: "As I have not had the advantage of traveling this route," which occurred in the same paragraph which begins with the words, "I must now beg you will

travel with Hutchins from hence to Detroit. He will
5034 conduct you up the head branches of this river, and,

after a short passage, you will embark again on the waters of Lake Michigan, discovering how the operations of this great country will be facilitated by the peculiar courses of its immense and numerous rivers. His observations, I have been told, are considerably accurate, and, as I have not had the advantage of traveling this route, I recommend you to read his book, which was originally published in England, and no doubt is still to be had," I will say I believe that is correct. That paragraph immediately followed the paragraph which precedes the one counsel read to me from the 1793 edition and is the same paragraph a portion of which I read from the 1797 edition. By way of further information as to what Imlay knew about this country, on page 47 of the 1797 edition I find this statement which is as follows:

5035 "I have gone cursorily over the western country which is peopled, and about to be peopled; but have purposely avoided taking any notice of those parts which are so little known, and of which I could say nothing but from the information of hunters and savages, which has been industriously collected and published by Carver, Jefferson and others. Besides, as it is your wish only to be informed of the advantages of settlement, it would have been idle to have troubled you with accounts of countries that will not be settled, or at least formed into states, in our time."

As to the standing of Imlay among historians, will say, further that he is regarded as an author worthy of consideration, as of some value when speaking of Kentucky in particular, and in general of conditions of which he had personal knowledge and cognizance. Do not understand that he is looked upon as a general authority in any other way, or in any other field, and as I have indicated his language requires careful sifting; he wielded a ready pen, and words are rather obviously at times to be taken in a figurative rather than in a literal sense.

5036 As to the passage first read I do not know what Imlay may have had reference to there. I suggest that he may have referred to Jefferson's work on Virginia; perhaps not. Carver described the travels he took or purported to have taken up the Mississippi. He came back by way of the Fox-Wisconsin.

5037 Cahokia and Kaskaskia were peopled when Imlay wrote. He may have had in mind when he refers to the unpeopled country Northern Illinois, Wisconsin, and Michigan, including Chicago and Desplaines river vicinity.

Q. Have you any reason to doubt the correctness of this statement of Kinzie's in that letter to Cass, 1815, appearing at transcript, p. 232 (Abst., 101), "As at present boats of several tons burden can pass from Lake Michigan into the Mississippi river?"

Objection; incompetent, irrelevant and immaterial.

5038 Answering that fraction of the sentence, I must put some interpretation upon it. Assuming that he means to state that boats of several tons burden can pass from Lake Michigan into the Mississippi generally, or all the time, I consider the statement inaccurate. In the remainder of the sentence he says there are only $4\frac{1}{2}$ feet difference in the elevation of the two waters. If by two waters he refers to Lake Michigan and the Mississippi, I have no opinion to pass. I presume he refers to Lake Michigan and the Desplaines, which I believe would not be entirely accurate. That is I assume the reference to the point on the Desplaines, where the entrance would naturally be made. There is a point on the Desplaines where there is no difference between it and Lake Michigan, and another point where the difference would be exactly $4\frac{1}{2}$ feet.

Q. But now as applied to certain seasons, seasons of high water for example, you would have no reason to doubt the correctness of that statement as I gathered from your evidence already given; that is right, is it not?

Same objection that it is incompetent, immaterial and irrelevant.

A. It would apply to such seasons as Child, I believe, described, or Hubbard described in portions of his work, or perhaps La Salle, although I have not at this moment the definite reference in mind. I see no reason to object to the statement.

Q. Taking the whole letter into consideration and also what you know of Kinzie, would you as a historian conclude

that Kinzie referred there to actual use of that route by boats of several tons burden?

Objected to as incompetent, irrelevant and immaterial.

A. I am not sure that I understand what counsel has in mind in asking the question. I cannot see just what he means to ask me.

5040 As to whether, taking all the facts into consideration that would be pertinent and that are in my mind, as to whether I, as a historian, would think that Kinzie meant to tell Governor Cass that boats of several tons burden had passed, in effect or in substance, I would say I would think what he was telling Governor Cass was as to the possibility; that the conditions are such that boats may pass. That is what appears in the passage itself at any rate.

As to whether I do not think that the passage would warrant us in inferring that Kinzie meant Governor Cass to understand that boats had passed, I would say I presume we might infer whatever we thought probable. Counsel I believe is asking me about this particular passage.

Q. That passage taken in connection with all you know about Kinzie and so on.

A. Does counsel want me to state what I think it would be possible to infer from this passage and these other things that he has allowed me to consider?

Q. No, no; if you cannot answer the question as I put it just let it go.

The WITNESS. As to whether Cass had been governor of Michigan for a year or two at that time, in 1815, would say I haven't in mind the date when Cass became governor of Michigan. I presume he may have been.

5041 Before he was governor he had served under General Hull in 1812 at the beginning of the war, and Hull had been governor of Michigan prior to that war.

Q. Hull probably knew considerable about the Desplaines river route and its use, don't you think?

Objected to as incompetent, irrelevant and immaterial.

The WITNESS (continuing): My attention is directed to a map from the Chicago Historical Society, entitled, "Copy of map of the country of Lake Michigan to the Illinois river, from the papers of Gen. W. M. Hull, Gov. of Michigan from 1805 to 1822." That shows the southern part of Lake Michigan and certain rivers flowing into Lake Michigan, and a portion of the Illinois down as far as Peoria Lake, certain rivers flowing

into the Illinois above that point, including Reynard, the Desplaines and Kankakee. It indicates a portage
 5042 between the Chicago and Desplaines river, shows the Chicago, Little and Great Kallimick, and River du Chemin. I read the notation on the corner of the map:

“Distance by water from one river to another as performed by the French navigators of the waters:

	Miles
From Chicagou to the portage	6
The portage	1
From the portage to the river Aux Plaines	9
From the R. De Cross R.	6
To Lake Mounjoliette	38
To R. Du Page	11
To the Fork of the Kankakee	4
To river au Sable	3
To the Big Messane	6
To the little Do	3
To the rapids of Manaenoula	18
To the Fox or R. des Renards	6
To the Vermillion	12
5043 To the Peoria Lake	69
The Lake	21

213 miles.”

As to whether in brief the map seems to be a description of the route from Lake Michigan to the Illinois river, down the Illinois as far as Peoria Lake, I would say as I said a few moment ago it shows those things in addition to the other features that I have pointed out; it shows the whole southern end of Lake Michigan and the north branch of the Chicago river.

Q. Don't you think it is fair to assume that Cass, both from his experience in the country and his association with Hull and so on was pretty familiar with the Desplaines river route?

Mr. SCOTT. Objected to as incompetent, immaterial and irrelevant.

A. Does counsel mean was he personally familiar with the Desplaines river?

Mr. CORNEAU. I do not mean necessarily personally so, but don't you think he had some familiarity with it from

such sources for example as Charlevoix got his information about it from?

Objected to as incompetent, immaterial and irrelevant.

A. I am not clear how much counsel wishes me to assume as to Hull's knowledge of the Desplaines river in answering that question.

There had been an army post at Chicago from 1803 to 1812.

As to whether that army post had been under general command of General Hull, that is, that he was in command of all this western country, I would say that he was governor of Michigan territory. Kingsbury was in command of the army post a large part of the time, Hull was not in command of this post from 1803 to 1812. During a short period in the beginning of the war in 1812, he was in charge of affairs in the northwest, and superior in command at Fort Dearborn.

5045 It seems evident someone made a map of this vicinity for him. I doubt if he personally had ever been here. He was a man of sluggish temperament physically, and was content to spend his time at Detroit in contrast to Cass who engaged in frequent journeys. He regarded the map as pretty good evidence that there had been a route of travel by the Chicago portage and Desplaines, at some time, prior to the making of this map. I would say that the map and document as to the route of travel from Detroit to the Illinois, would stand on the same basis, as neither map nor document would have been produced if there had never been any travel by the route that each one deals with.

5047 In Cass' letter, transcript page 229 (Abst., 99), is a general statement to the effect that there were three channels of communication for British traders between the Mississippi, the Missouri country and Canada. There is an indication as to what these routes were. I suppose Cass, or any well informed man in this period, might easily have 5048 possessed as much knowledge of the Illinois route as is indicated in that letter.

Q. And it is very likely, is it not, that Cass and Kinzie were acquainted?

Objection: Incompetent, immaterial and irrelevant.

A. Kinzie was at Detroit at about this time, and Cass 5049 as well. I presume they may have been acquainted.

From the fact that Kinzie was addressing a letter to a

man that might be expected to be familiar with the subject on which he wrote, who was governor of the territory, that they were acquainted, and the letter was written to induce the establishment of a post, I do not see that it is an obvious implication that Kinzie must tell the truth. I would assume if Cass knew as much about this particular portion of the country as Kinzie did, there would have been no need of writing the letter.

As to whether Kinzie would not have had about the 5050 same motive that I thought La Hontan had to make his statements as accurate as possible so that people who might be interested in the subject and checked him up, would be inclined to believe him, would say Kinzie apparently had a very direct and obvious motive in writing this letter. He wished to have a post established at Chicago so that he might get whatever encouragement would follow from that establishment, in the prosecution of his trade in this region. I would suppose, assuming that if the man was swayed by any motives of self-interest at all, that he would shape his letter with that in view.

Q. Would you indulge in the one inference in the case of La Hontan and in a different inference in the case of Kinzie?

A. Do you mean to ask me if these two are exactly parallel cases?

Q. No, just exactly the question I put to you.

A. Do you mean to ask, would I assume that La Hontan told the truth and on the contrary, that Kinzie did not tell the truth?

Q. No, you heard the question asked you.

A. Read the question, Mr. Satterlee.

(Question read.)

A. Now read enough, Mr. Satterlee, to show what the two inferences referred to are.

(Record read.)

5051 A. I will say for the record that in my opinion I have squarely answered the question.

Q. I am saying for the record that in my opinion, you have not. However, I will put the question differently: Was I right in understanding that it was your judgment that La Hontan's account was entitled to credence because he would have an incentive to tell the truth, due to the fact that he wanted his story about the discovery of the Long river to be believed, and would therefore make his accounts of the

journey to the Long river as accurate as possible, considering his means of information?

A. I believe I undertook to point out with reference to La Hontan's account that in my judgment the circumstances were such that he would rather tell the truth than to deliberately falsify so far as dealing with portions of the country that were known to Europeans at that time might be concerned. I understand that some historians, who have studied this subject, agree with me, or that I am in harmony
5052 with them in this conclusion. I do not understand that

Kinzie wrote with the same purpose or was swayed by the same motive as was Lahontan. Kinzie was desirous of inducing the establishment by the government of a post at Chicago, and had vital financial interest in the reestablishment of a garrison here at Chicago, which may have swayed his statements of descriptions of geographical conditions.

At transcript, page 232 (Abst., 101), his letter says:

"In a few years they will become an object of great importance to the U. States as at present boats of several tons burthen can pass from Lake Michigan into the
5053 Mississippi River there being only four and a half feet difference in the elevation of the two waters."

As to boats of several tons burden, if that is a general statement of constant application, it is untrue. If it refers to seasons of unusual or high flood in the Desplaines, when the country between the river and the Chicago was overflowed, I see no reason to object to the statement. As to the difference in elevation, I understand that Kinzie was mistaken that the difference in elevation was greater than he stated.

5054 I referred to Andreas History, page 105, The Lalime Homicide. I assumed until that question was asked that no one objected to the proposition that Kinzie killed Lalime. I had no particular knowledge or recollection on the subject, and referred to Andreas as the readiest printed source of information.

Whereupon the witness read further from Andreas, page 105, in this connection:

5055 "What follows is as given by Mrs. Porthier herself in August and September, 1883:

"My mother was an Ottawa woman, my father was a Frenchman. He was a good scholar, a very handsome man, and had many books. He taught us children to speak French, and we all learned to speak Indian of the

tribe and mother. We had no schools nor education. I never learned to read or write. My father had his house in Milwaukee, where he traded with the Indians and did some blacksmithing for them, and for other traders. He fixed guns and traps for them. Before the fort was burned (August, 1812) my father was down to the fort—the year before—and did blacksmith work there. The family went down while he was there, and some of us lived in the Ouilmette house, across the river from the fort. My sister Madaline (afterwards the wife of John K. Clark) and I saw the fight between old John Kinzie and Lalime when he (Lalime) was killed.

5056 'The Lalime Homicide.—It was sunset when they used to shut the gates of the Fort. Kinzie and Lalime came out together and soon we heard Lieutenant Helm call out for Mr. Kinzie to look out for Lalime, as he had a pistol. Quick we saw the men come together; we heard the pistol go off, and saw the smoke. Then they fell down together. I don't know as Lalime got up at all but Kinzie got home pretty quick. Blood was running from his shoulder where Lalime had shot him. In the night he packed up some things, and my father took him to Milwaukee, where he staid till his shoulder got well, and he found he wouldn't be troubled if he came back. You see Kinzie wasn't to blame at all. He didn't have any pistol nor knife—nothing. After Lalime shot him and Kinzie got his arms around him, he (Lalime) pulled out his dirk and as they fell he was stabbed with his own knife. That is what they all said. I didn't see the knife at all. I don't remember where Lalime was buried. I don't think his grave was very near Mr. Kinzie's house. I don't remember that Mr. Kinzie ever took care of the grave. That is all I know about it. I don't know what the quarrel was about. It was an old one—business, I guess.

After Mr. Kinzie came back (1816) he came up to Milwaukee and visited my father and took me to live with him. (We were not there when the fort was burned—we had gone back to Milwaukee.) I lived with him until he died, then I married Joseph Porthier."

I submit that the passage furnishes reasonable evidence that Lalime was killed.

5057 Referring to the Wilson manuscript, wherein is the statement that Dr. Cooper told Wilson that he thought

Kinzie was a murderer, that manuscript says that Cooper and Kinzie had quarreled some years before the Lalime affair, and before Cooper talked to Wilson, and that Cooper had never spoken to him afterwards, all of which appears in what

I put into the record.

5058 I believe Wilson made it evident that he accepted the statement of Hubbard in the matter. I stated it to show something as to the character of Kinzie. It is my estimate that it shows Kinzie was a typical Indian trader of the period, with violent antipathies, and strong vigorous character, who might not hesitate to prevaricate to accomplish a thing he had much at heart. If he would kill another in a business quarrel, he might write a letter to Cass, where he was seeking the aid of the Government to recover his business, and
5059 make statements which a candid examination of the facts would not bear out. I would not think that the conclusion that he might make mis-statements would follow from the mere fact that he killed a man, without determining myself whether or not he did it in self-defense.

I am not aware that Cooper's account is at variance with all others.

5060 As to whether there are any other accounts that tend to corroborate Cooper in any way would say I am not aware what all other accounts say; therefore I cannot answer counsel's question.

Being directed to turn to some others that tend to corroborate Dr. Cooper's account I would say speaking from memory and not having looked the matter over for some time, I think it would be found that Dr. Dilg in general would corroborate Dr. Cooper; that the main argument of the killing of Indians was not entirely a Sunday school affair so far as Kinzie was concerned.

To explain what I mean by the expression "Sunday-school affair" would say that Kinzie was not so innocent of all evil intents in the matter as Mrs. Porthier would make it appear from this passage in Andreas, which counsel has had me read into the record.

I believe Mr. Head would not seriously disagree with Mr. Dilg or Cooper as to this matter, although I am not certain in connection with this matter whether Mr. Head touches
5061 upon the killing of La Lime. He does deal with Kinzie's character. Dilg was a resident of Chicago who may be described perhaps as an antiquarian who delved much in Chicago geology and in Chicago local history especially as

dealing with Indian affairs, and I might say perhaps especially in dealing with the Chicago massacre.

A. I would not be inclined to disagree with counsel's suggestion that he was not in Chicago at the time of this Kinzie La Lime affair. He died about the year 1901 or some such date as that.

Q. Well, I never heard of the man before. Can you turn to what he says on the subject?

A. I will say that Mr. Dilg's manuscript is in the form of criticisms upon some 90 or 100 odd accounts of the Chicago massacre that he has found and comments upon, and that it is in lead pencil largely. I presume it would take some time.

Q. Let us not stop for it then. Have you arrived yourself to any conclusion as to the true facts?

5062 A. Some of the facts I have and some I have not. In general I would say that it seems to me perfectly evident that Kinzie killed La Lime; that there had been a rivalry between the two men for some time prior thereto; that Kinzie was a large powerful man; Lalime small and slight. As to the actual killing, accounts differ widely. Immediately
5063 after the killing, Kinzie fled to the woods, escaped to Milwaukee. Apparently after the thing had blown over sometime he returned to Chicago.

I regard Mrs. Porthier's account with suspicion, because she states things I think she could not have known, and that she and her father were friends of the Kinzies; that she made her home with them for a considerable time. Would regard her account as second hand version of what Kinzie himself may have said. The account was obtained from her about 1880 concerning what happened when she was a child in 1812. She was an illiterate woman; and it is probable that the man who took the account from her lips, secured an interview with
her, and might have colored what she said as he pleased,
5064 in the way newspaper reporters are in the habit of securing interviews.

As to what Hubbard thought, he was an intimate friend of the Kinzie family. He came here first in 1818, and evidently relies for his knowledge of the affair upon what Kinzie told him. Do not suppose that the exact amount of culpability of Kinzie can ever be settled.

5065 Some accounts, speaking from memory, state that some investigation or inquiry was made by the officers of the garrison at Chicago as to whether they ever took any action in respect to the affray. I will say that it may be assumed

that was favorable to Kinzie, else he would not have dared to return and continue his residence. That is not my own assumption. I think it is not a necessary inference that they concluded Kinzie was innocent, because he escaped punishment. Mrs. Porthier says, Andres (reading on page 5066 73):

"He was concealed in the woods until night and then taken to Milwaukee by some of the Indians, where he was kept in the house of Mr. Mirandeau, the father of Mrs. Porthier, until the facts of the case were known, and it was safe for him to return. Mr. Lalime had warm friends at the fort, and until it was known that the killing was accidental and the struggle, on Mr. Kinzie's part, in self-defense, great anger was excited, and many threats were made against him. The verdict rendered by the officers at the fort, on the examination of the circumstances, was 'justifiable homicide,' and Mr. Kinzie returned to Chicago as soon as his wound was healed."

Would like to ask counsel why Kinzie fled if he was innocent in reference to this affair.

5067 Would disregard Mrs. Porthier's statement here. That is would hold them as only suggestive, and of no importance, unless I had corroborative evidence supporting them.

As to whether at record, page 4081, I stated of Kinzie that "though a citizen of the United States he trimmed during the war of 1812 and entered the British service during the war, also that in this very year, 1815, in which this letter is written, Kinzie was still in the British service." I think counsel is mistaken as to the reference.

I will say for counsel's information that I think he had taken up Kinzie some time before and I merely returned to that subject because the book had been produced, I was asked for the evidence and the book being produced I came back to it.

As to whether I recall that statement, I would say I think I made no such statement. I will call counsel's attention to page 4058 (Abst., 1535) of the record as follows:

"Further as to the character of Kinzie, without undertaking to pass final judgment upon him at this time, I would observe that there is evidence in existence which is worthy of very careful and serious consideration, which tends to indicate that he killed his rival, John

LaLime, in a quarrel over business rivalry, in a way that is strongly suggestive of murder, although I do not know or say at this time that it is susceptible of proof. That through a citizen of the United States he trimmed during the war of 1812 and entered the British service during the war; and that while so engaged he trimmed again, at least his associates believed him to have done so, and proved a traitor to the British, and therefore they sought to visit out punishment upon him. That in this very year, 1815, in which this letter is written, Kinzie was still in the British service."

COUNSEL FOR THE COMPLAINANT. That, at any rate, was the statement I had in mind.

Now, I assume that you read all of the report of this court martial proceedings in the 19th Michigan Pioneer and Historical Collections which you cited in support of those statements, did you not?

A. Without remembering I would suppose that I did.
5069 At any rate, I have read considerable of it, I presume all of it, perhaps.

The court of inquiry apparently convened on October 10th, 1815, I believe for the purpose of inquiring into the conduct of Lieutenant Cadot on an expedition which he was directed to make in 1814. The paragraph transcript 4084. (Abst.,
5070 1543) beginning "These men had likewise done much mischief," etc., and ending "in irons, to Amherburg," and so on, I would consider as evidence, showing that Kinzie was in the British service in 1815.

I call attention to 16 Michigan Pioneer & Historical Collections, page 333:

"Capt. Nelson of the Schooner Vermillion being duly sworn was examined as follows:

Question. Do you know anything of Kinzie or of his being employed by the British Government?

Answer. Yes. He was acting as an officer in the Indian Dept. & employed by Genl. Proctor & Col. Elliott, in taking Powder to the Indians. At the beginning of the War, he came in with the other Indians, dressed like them and acting like them with the British Troops. He was afterwards discovered by Tecumseh to be acting a treacherous part with the Indians who told General Proctor in council that if he was not hung the Indians themselves would put him to death. After being sent

in irons to Quebec he made his escape & is now a Tide Waiter at Detroit.

Question. How long have you known Kinzie?

Answer. I knew him twenty-five years chiefly at Detroit.

Question from the Court. Did you conceive him to be a British Subject?

Answer. I did, & believe him to have been enrolled in the Militia as such.

Capt. John Askin Ind. Dept, duly sworn:

Question from the Court. How long have you known Kinzie?

Answer. Since the year 1787.

Question. Do you know him as a British subject & of his being in the service of Govt.

Answer. Yes, he was enrolled in the militia commanded by my father."

5072 The quotation is "even when employed in the British service, under Mr. Dickson at Detroit, in 1815, they were industriously exerting themselves to seduce them from our alliance." Am not sure whether an examination would show that that statement is in error as to the date.

Michael Courolle, page 331, testifies in 1813, Chadronet was an interpreter in the British Indian Department, and he believes that Kinzie was also employed in the same manner by Dickson.

Upon being requested by counsel, I read from 10 Michigan Pioneer and Historical Collections, page 328, paragraph following the one I read at transcript page 4084 (Abst., 1543) (reading):

5073 "This man, in conjunction with another of the name of Burnet, also a British subject, in the same year headed an Armed Party of the Enemy & carried off Prisoners to Detroit, the British Traders between the Grand River & St. Josephs on Lake Michigan named as per margin."

The names in the margin are Jos. Bailey, E. E. Lamoran-die, McBurnet, D. Bourassau.

"Lt. Col. McDonall was so impressed with the necessity of seizing these worthless men who had so repeatedly transgressed against their country that one of his first acts on his arrival at Mackina was to dispatch a party from thence, to bring them prisoners to that

place. Lieut. Chadronet who commenced it had married the sister of young Chadronet's mother above alluded to and had brought him up in his family with the affection and kindness of a father, but the wretch with almost unparalleled ingratitude, on his (Lieut. Chadronet's) landing and telling him, he must come in a prisoner with him to Mackina and seized his rifle and shot him on the spot. It therefore became an object of importance to rid the country if possible of these pests and Lieut. Cadot was especially instructed by Lt. Col. McDonnall to spare no pains or expense in causing them to be made prisoners and sent in to Michillimackinac but no opportunity having occurred and having delivered his presents he returned to that place on the 26th January."

As to whether that does not show pretty clearly to my mind that all these obnoxious things, that according to Lt. Col. McDonall, Kinzie had done, occurred before the time he instructed Lieut. Cadet to arrest them, I would say I thought counsel was asking me about the time when Kinzie was in the British service.

Q. No, I understand this is pertinent; as I gathered from the account it is about like this: Lt. Col. McDonall undertook to explain before the court martial began to hear evidence began to hear evidence the way in which Lieut. Cadot happened to be sent on this mission and why he had endeavored to take Kinzie. That was the charge against him, as I gathered and so he explained the various reasons why he had sent Cadot out to take Kinzie and he enumerated them all, and those things which he enumerates were happenings of course which occurred before Lieut. Cadot was sent out. That is about the way I read the account. I am just asking you if you do not think that word 1815 is a misprint? 1813 seems to me to be the correct date?

A. This being a point that I had not particularly considered until counsel recently called my attention to it, I would say that I am not certain at the moment. I would say in reading the passage which counsel has just had me read into the record that they are dealing there with the latter part of 1814 and early part of 1815; that is to say, down to the 26th of January. And further, the opening sentence of the next paragraph is "On the 2nd of March," and so forth. I am not clear on that point and

would have to ask for an opportunity to study the document before I answered finally.

Q. Supposing you study it just a little now if it won't take too long.

A. Without having gone through all the document, but only the next two or three pages at this time. I will say it seems evident that the beginning of the offenses with which Chadronet and Kinzie were charged must have been before 1813. It is not evident from this examination that I have just made that those offenses had ceased at 1815. I think to the contrary that Kinzie and Chadronet were still at large in this country and Cadot was expected to apprehend them. That this expedition of Cadot's apparently began in the late fall or early winter of 1814 and continued over into the beginning of the year 1815, for he, having spoken of the conversation he had with the Indians and the putting of a price upon the head of the characters he was seeking to apprehend, further goes on and shows, and I am referring to page 330 of the volume, that he returned to Mackinaw on the 26th of January.

Q. Now, don't you gather from the whole account 5076 that this arrest of Kenzie by the British and his transportation to Quebec and his subsequent escape all occurred before Lieut. Cadot was sent out by Lt. Col. McDonall?

A. Will it be enough to say that I gather that the beginning of this offense of Chadronet and Kinzie occurred before 1815?

Q. You said the beginning, but it was not clear from that fact whether you included this particular incident I spoke of as the beginning or intermediate or the end.

A. My impression is that an arrest of Kinzie occurred prior to 1815. That Kinzie had escaped and is believed at any rate to be at large in this region at this time, and that Cadot goes out to apprehend him.

Q. I am not yet clear whether you made this as a positive statement or a statement that there was evidence to show that in this particular year 1815 in which this letter was written Kinzie was still in the British service. That would require a modification, would it not; at least if you used it in the sense of meaning that he was actively employing himself in the aid of the British government?

A. I believe it will appear on an examination of my state-

ment that I said there was evidence worthy of consideration to this effect. I see no reason as yet to modify that statement. Perhaps a more careful examination and study
5077 of the document might lead me to modify it; but such hasty examination as I have here made while counsel was questioning me, has not led me to do so as yet.

As to whether I have some other sort of service in mind as service by Kinzie than this employment as interpreter by Dickson mentioned by Lt. Col. McDonall, I would say I would have such service as was indicated in this account of the proceedings of the court of inquiry. I have not in mind as to whether this is the only reference to Kinzie's service or not.

As to whether Dickson was in Detroit in 1815, the war came to an end that year, and I presume he would have moved on even had he been there at any time in the year.

5078 My impression is that Wau-Bun states that Kinzie was born in Canada. At any rate he spent some time of his early life there. Dr. Thwaites states he was born in Quebec, and that the family moved to Detroit. He came to Chicago about 1804; stayed until the Chicago massacre,
5079 which occurred in 1812. I suppose he was not in the British militia during that period. After the massacre he went to Detroit. Assuming that he went there a few months after the massacre, it was in possession of the British.

As to whether I do not understand that Kinzie was in the militia at that time I would say in reference to this
5080 and other questions that are being asked along this line that I understand there is a good deal of dispute and difference of statement as to just what Kinzie was doing during these years from 1812 to 1816.

As to whether I have anything to show the date when he was in the British militia I would call attention to the court of inquiry proceedings on Lieut. Cadot's conduct.

Q. I think you will find no statement as to any date when he was in the British militia. See if you do.

A. There is no date given. I would judge from John Askins' testimony that it probably was some time prior, a considerable time prior to the war of 1812. That is an inference of course or an impression.

As to whether he was in the employ of Mr. Dickson as an interpreter there is not any evidence of his being in any sort of British service during the war of 1812, I would say that if counsel asks me if there is no evidence I would call atten-

tion to the testimony of Captain Nelson. I am not passing an opinion as to the validity of that testimony.

Whereupon at the request of counsel the witness read the first question and answer of Captain Nelson.

5081 "Do you know anything of Kinzie or of his being employed by the British government?

A. Yes, he was acting as an officer in the Indian Department and employed by Gen. Proctor and Col. Elliott in taking powder to the Indians.

5082 At the beginning of the war he came in with the other Indians, dressed like them and acting like them with the British troops. He was afterwards discovered by Teshumseh to be acting a treacherous part with the Indians who told General Proctor in council that if he was not hung the Indians themselves would put him to death. After being sent in irons to Quebec he made his escape and is now a Tide Waiter at Detroit."

As to whether that indicates to me that he was in the British service after the outbreak of the war of 1812, I would ask would he be taking powder to the Indians and employed by General Proctor and Colonel Elliott during the war of 1812.

As to whether there does not seem to be some inconsistency between these statements as I read it, I would say counsel asked me if there was any evidence and I undertook to answer the question by citing the evidence.

Whereupon counsel for the government stated that 5083 the inconsistency was in this, whether Kinzie was acting at the time, as the witness construes it, from the beginning of the war, and at the same time came in with the Indians at the beginning of the war.

The WITNESS. If counsel will explain the point perhaps I would see it more quickly.

Q. I tried to just a moment ago. The statement is that he was employed to take powder, and so on to the Indians, and the other statement is that he came in with the Indians at the beginning of the war, dressed as one of them and so on. Do not these two statements seem to you to be inconsistent?

A. I am not clear that they are. They may be possibly. He might be dressed like an Indian and acting in that fashion and still be an officer in the British Indian department. If you mean to ask as to the phrase "At the beginning of the war," I would suppose that to be incorrect if you interpret that to

mean at the time when the war first began. If you interpret it in the early period of the war it might not be incorrect.

Q. Just give us your opinion as to the validity of that evidence whether it is inconsistent or not?

A. I believe I have expressed that opinion, have I not?

Q. I did not hear it; at least I did not understand you then. As to the validity of the evidence and as to 5084 whether he was serving in the British service at this time?

Q. In the Indian department, yes; as to whether Captain Nelson's evidence in that respect was true. Was he not in that at the beginning of the war?

A. I have already called attention to that; the beginning of the war might mean the day war was actually declared or the day hostilities began; or it might be interpreted as speaking generally at the beginning of the early period of the war. One says at the beginning of the summer, but he does not necessarily have in mind the actual day on which summer begins.

The testimony of the various witnesses is uncertain. In a general way, one would expect there would be discrepancies in detail where different men, who have been in different places, undertake to testify on a common subject. A historian 5085 generally does not have the available evidence which has been given under such circumstances as this. The men were put under oath, and are presumably men of some standing, judging from the rank and position which they held. As to whether or not this is prejudiced testimony, I have not gone into that. It is certainly evidence that is worthy of serious consideration.

Whereupon the witness read Colonel McDonall's letter transmitting the report of the court of inquiry from 16 Michigan Pioneer & Historical Collections, page 325, having been requested so to do by complainant's counsel (reading):

"His Excellency directed me to a full and complete investigation of the circumstances complained of, I was fortunate in still having at this remote Post so many of the necessary evidences. Solemnly convinced in my own mind that the charges in themselves were a base calumny and utterly without foundation, I felt peculiarly interested in their refutation conscious that their chief object was to shut our eyes to the manifest infringement of the Treaty of Ghent, and to the horrible

tragedy which they meditate against the Indians of the Mississippi."

5086 As to whether or not, taking the whole thing together, I get the idea that this court martial was a sort of rescue corps of ten or a whitewashing affair, will say that without having read all of this letter to which counsel has called my attention, I would suppose that the writer, Lieutenant Colonel McDonall, was convinced that the charges which he referred to were unfounded. If that is true, I am not sure that it would be at all fair to call this a whitewashing report. That is, I understand that the term "whitewashing report" is usually applied in an unfavorable sense. If the thing were untrue and it was his expectation that the court of inquiry would show that fact, it might not and need not necessarily be a whitewashing affair.

5087 I call counsel's attention further to the fact that there were two things which this court martial inquiry knew; one was with reference to Cadot's treatment or attempted treatment of Chadronet; and the other was the charge as to the British seeking to incite the hostility of the Indians after the treaty of peace and that I believe is what he especially considers is unfounded and expects to refute.

As to whether his whole letter discloses a good deal of prejudice toward the Americans, would say I have not read the whole letters. I would suppose that a soldier of Great Britain in 1815 would not be entirely unprejudiced with reference to the United States, or entirely friendly toward them in his feeling and disposition.

Speaking from memory and not having read the letter I believe that it was the case, that complaint had been made by the American government concerning these matters which were under investigation. I think he mentions in that letter that about that time, 1815, Governor Cass recommended Kinzie for employment by this government as Indian agent at Chicago.

5088 Governor Cass' letter of 1815, transcript page 230, (Abst., 100) referring to Kinzie, says:

"Whom I recommend to you for the appointment of Agent at Chicago."

It is not apparent when that recommendation was made; evidently prior to this time.

Logan's report appearing at transcript 4065 (Abst., 1537), is dated 1718.

I believe Pennsylvania traders during the first half of the 18th Century penetrated to the Ohio, and traded along it.

5089 Winsor's Mississippi Basin (reading on page 149):

"The Carolina traders had put up two booths on the Wabash, and rumors reached Kaskaskia of other stations which they had established farther up the Ohio valley. These last intruders were probably Pennsylvanians,—at least, it is so assumed in the treaty made at Albany in 1754. The language of such treaties is rarely the best authority; but it is certain that Vaudreuil, in Quebec, believed it at the time."

The date that is referred to here, then, is evidently 1725.

We assumed Logan's report was in 1718.

5090 Ouiatanon was established about 1720. It shows in general here that there was a dispute between the French and English as to the Ohio and Wabash, and lateral valleys, and that the chapter heading shows that Winsor is talking in particular about the period from 1720 to 1729.

In my criticism of Logan's report, I referred to Ramezay's report, and conclude (Trans., 4068; Abst., 1538), "I presume it is a fair inference that if a fort already existed in Chicago in November, 1705, this recommendation would not have been made." Instead of 1705, the date should be 1715.

5091 In 1715 there was no fort at Chicago, and Ramezay urged the establishment of one. Logan's report in 1718 mentions that there was one there. It is conceivable that there was not one in 1715, but that there was one in 1718, but I have seen no evidence that a fort was established here in that period. I have in mind a general understanding that there was no establishment at Chicago at that time, which

5092 I think would be capable of demonstration. My point was that I understood there was no fort in Chicago in 1718. I supposed Logan, if so far as he was not in error, was speaking about a fort across the lake. I know of no evidence of there being a fort in Chicago in 1718, and it is extremely improbable, if not certain, that there was not any there in that year. Ramezay's report would show there was none in 1715. The fact that Justin Winsor used Logan's report and the degree of validity because of that use, would depend entirely on how he used it, and how valid I considered the use he made of it might be.

5093 I note that Justin Winsor simply states that this land carriage is described by Logan thus and so. He evidently does not state that he approves of the description.

I would suppose, seeing that Mr. Winsor made that statement, that Logan had so described it, that that was pretty good evidence that Logan had given such a description, and in fact we know that he had. Counsel's point being whether this would establish the validity of the report, Winsor makes no statement whatever as to that that I see. I would like to ask for my own information if counsel stated that Ramzay's report threw any light on Logan's report, or as to the validity of the report?

As to whether the fact that Justin Winsor referred to it and used it at that point would give it any weight, I would say simply this, that it indicates there was no fort there in 1715. Then if Logan's report was correct such a fort must have been established between 1715 and 1718, and unless it can be shown that it was, or on the other hand, if it can be shown that it was not during that period, then Logan's statement would obviously be incorrect.

5094 I have no reason to doubt Long's having been in Chicago. I could not prove it, though I think it reasonably evident he was here in 1817, or before the making of the report of 1817.

5095 My attention is directed to the map which accompanied Long's expedition of 1819 and 1820, compiled by Edwin James in London in 1823. On the lower right hand corner is the notation "Long's route 1817." Here are dotted lines up along the Illinois river coming to the Illinois river with notation "Long's Route, 1816." Other routes are shown through the country. There is no notation on them as to date, but running up toward Lake Michigan, around the lower end of the lake and over to Chicago and so on.

Q. That would indicate, would it not, that Long had come out on his expedition of 1816-1817, by or over a route up to the foot of Lake Michigan, and thence to Chicago, and thence down the Illinois valley and around St. Louis
5096 and then back again by way of a southern route down toward the bottom of the map, having in mind the fact that the route through the Illinois valley is indicated as the route of 1816, and the fact that the route over at the lower right hand corner of the map is indicated as the route of 1817?

A. I am not sure that necessarily follows. Am willing to say that the map indicates that whoever made it apparently thought that Long was going down through Illinois in 1816,

or up as the case may be. The rest of the assumption would not be evident.

Do not know when Long commenced his expedition of 1816-1817.

5097 On page 196 of the National Register for January to June, 1817, there is an allusion to the garrison at Chicago, and so forth. As to whether that would fix the time of his being in Chicago in all probability at sometime after the 4th of July, I would say, evidently his presence in Chicago was after the fact he has alluded to here, else he could hardly have made the statement. It may have been any time up to the 4th of March following, so far as the report shows. I am not aware of any other expedition by Long, than those of 1816-1817 and 1819-1820.

5098 Assuming that Long traveled the route indicated by the map, it might have taken three months to go from Chicago to Washington. As to whether it is pretty clear, that according to the map, and the long statement about the progress, had been made on the fort, he was in the Illinois country between July and December, 1816, I would say it is clear that he was at Chicago between July and March, 1817.

5099 I would suppose Long made his observations of the Desplaines, if he made any, between July 4th, 1816, and March 4th, 1817. Assuming that the map is correct, I would suppose it was sometime in 1816 rather than in 1817.

Counsel says that at transcript page 4092 (Abst., 1546) I state in effect that the editor of the Navigator had not been entirely frank and truthful with his readers; that I read a passage from the advertisement which preceded the text, and called attention to the fact that the same passage appeared in the advertisement of the seventh edition as to which of the two statements I think lacks frankness or truthfulness. I pointed out there why I made use of these statements, and they seemed to me misleading.

5100 My statement there is:

"If this statement means anything at all, it seems to me that it means that this particular edition has been so improved as compared with preceding ones; yet I turn to the seventh edition published in 1811, and find the same paragraph word for word."

As to whether I mean that the 1824 edition, as compared with the seventh edition, had not been considerably enlarged. I would say I meant to say, and that is what I said, and if I am

wrong it will be made evident by comparing the two prefaces, for I offered at that time to read in what appeared in the preface of the seventh edition that the same statement appeared in the two. It is conceivable that the seventh edition may have been improved and enlarged over previous editions.

Q. Did you check up to find out whether or not that had been done?

A. Did I measure the editions, do you mean, as to what was in the volume?

5101 As to whether I examined them in any way to satisfy myself that the seventh edition had not been enlarged as against the earlier editions, and that the 1811 edition had not been enlarged as against the seventh edition, I would answer, no.

Q. Then I fail to get your point. Can you explain to us a little more in detail just what you mean?

A. I will answer counsel's question by reading from page 4092 from the record:

"If this statement means anything at all, it seems to me that it means that this particular edition has been so improved as compared with preceding ones; yet I turn to the seventh edition published in 1811 and find the same paragraph word for word."

Evidently he had copied, I should say, this portion of the preface from the preface to the seventh edition if not from an earlier edition than the seventh.

It is conceivable that the mere fact that he had used the same language would not be at all inconsistent with the statement that he makes that he had in fact enlarged
5102 it in each case. I suppose a comparison of the other books will be necessary to settle that point as to whether the editions had been enlarged respectively.

As to whether I have any reason to doubt the correctness of the statement in the Navigator found at 4483 of the record (Abst., 1687), "The Illinois is a fine navigable river, interlocking by a portage of four miles with the Chicagow, a short river which empties into Lake Michigan, through which channel the great route of the fur and peltry trade is carried on between St. Louis and Michilimackinack, and the other northern lakes," which appeared in the 1811 edition page 168,
5103 I would say I would be inclined to question whether, as he evidently means here that that was the chief or principal or only route by which that trade was carried on. Also the statement as to four miles interpretation or elabora-

tion. And, as to whether it was one of the routes, I would answer the Illinois is a fine navigable river; of course is true, speaking of the Illinois generally. So far as the portion that comes within four miles of Chicago is concerned, I should say that that is reasonably open to question and interpretation. I have no reason to doubt that trade was carried on between Lake Michigan and the Mississippi river by way of the Illinois route in general.

As to whether I would include as a part of that river route the Desplaines, I would say I would include it to such an extent as I have tried to indicate on my direct.

As to whether I would say that it was the great route of the fur and peltry trade between St. Louis and Michillimacinae, the principal route, at the period there spoken of or the period of which he was writing at the time of the publication of this book I would say I presume there were two important routes at that time; one was by way of Prairie du Chien and the other was by way of the Illinois river and Chicago.

5104 Stoddard in his sketches of Louisiana Historical and Descriptive, published in 1812, states that the Ouiskonging was one of the easterly branches of the Mississippi; "but as it is the great thoroughfare of trade between Canada and Louisiana, it is necessary to take some notice of it."

There is further discussion of the route, and mention somewhere of the other route by way of the Illinois and Chicago. Stoddard was U. S. army officer, who dwelt in Mississippi valley for several years. This volume is considered in general as worthy of attention and respect. Do not mean to say it is not properly subject to criticism. There is a statement which squarely contradicts that of Cramer in the Navigator.

5105 I continue reading from Stoddard's Louisiana Historical & Descriptive, 1812, page 368:

"Its confluence with that river is about six hundred miles above the mouth of the Missouri, and in north latitude forty-two degrees, forty minutes. About one hundred and seventy-five miles from its mouth is the portage between it and Fox river, which is less than two miles over; and in the season of high water a good boat channel extends from one to the other. From the portage to Green Bay, an arm of Lake Michigan, is about one hundred and eighty miles, and from thence to

Michilimacknak about two hundred and thirty miles. A great proportion of the Canadian trade passes this way, especially in the dry season, as at that time the Illinois affords a much less safe navigation. The Ouisconsing forms the upper boundary line of the lands ceded to the United States by the Sacs and Foxes in 1804. Those nations at that time ceded a small tract on the right bank of the Mississippi, directly opposite the mouth of the Ouisconsing, under the expectation that a garrison and factory would be erected on it.

On the left bank of the Mississippi and three miles only above the junction just mentioned, is situated the Village of Prairie des Chiens. This village, containing about twenty dwelling houses is situated on what may be called an island, as it is separated from the main land by a ravine which is connected both with the Mississippi and Ouisconsing, and which is filled with water in the time of the freshets. About twenty other houses are scattered about the neighborhood, and the whole population may be estimated at about three hundred souls. The habitual residents cultivate the land, and in some years dispose of about eighty thousand pounds of flour to the Indians and traders, exclusive of large quantities of beef and pork. The Canadian traders annually rendezvous at this place, where they divide their goods and despatch them to their several stations; where also they receive their returns in peltries, which are sent to
5107 Canada. These circumstances draw an immense number of Indians to the village; from five to six hundred at a time. So that in the course of the summer from five to seven thousand of them visit that place. Here is a fine site for a Garrison; and a factory, with a detachment of troops, would be able in some measure to regulate the trade of the Mississippi above it, and likewise that by way of the Ouisconsing.

"The Illinois river joins the Mississippi from the northeast about eighteen miles above the mouth of the Missouri. It is navigable to where it approximates to Lake Michigan, a distance of about four hundred and sixty miles. The isthmus between the Illinois and Chicago, is low and level, and eight miles in breadth; in the season of freshets a good boat navigation exists across the portage from one to the other; and from the head

of the usual navigation on the Chicago down to Lake Michigan is four miles. Boats and their cargoes in the dry season are transported across the portage by teams, which are kept there for the purpose. Hence it is easy to perceive that a good navigable canal may be constructed at this place, and at no great expense."

5108 I think Hubbard refers to the portage house that stood about five miles up the south branch from the mouth of the Chicago river. I think it was a house used by John Crafts. As to the details of its use, I would have to look into that. Supposing it to be used by Crafts, I suppose it would be used in connection with his establishment, which he is said to have had at that point. Hubbard says Crafts was running it for Mack & Conant, acting as wholesaler

5109 for Indian traders. That is all I have at this moment. Hubbard's letter does not refer to the portage house directly, but deals with Hard Scrabble, and Craft's establishment, which he identifies as Hard Scrabble. Steward locates the portage house on the south branch where Lincoln street crosses the river, as being about 4-7/8 miles
5110 down the river. I suppose that would locate Hard Scrabble, and therefore Conant's establishment. I may be mistaken on that.

I read from the reference to the Chicago portage, a manuscript by J. F. Steward, page 7 (reading):

"The distances traveled by the traders were always estimated, often very inaccurately, which accounts for the disparities often noted. The approximate distance from the lake to the Desplaines was established very early, particularly that to the head of the portage, giving as two French land leagues (2.42 miles). Taking the United States Survey of 1822, and following the winding of the south branch of the river 4.7/8 (2 French leagues), we find, where Lincoln street now crosses the river, a house shown on the map, and near it the words, 'Portage house.' From that, always north of and along the margin of the marches and little lakes to the Desplaines, is drawn, and so named, 'Portage road.' The two lakes that head the marsh between which, no doubt,
5111 was the beaver dam mentioned by La Salle, are laid down. One of them represents Mud Lake, although no name is given. It is probable that at the locality of the 'Portage house,' had always been a stopping place."

That shows the basis of the assumption.

There was a man named Lee, who had a farm at about this point, prior to or in 1812. Indians attacked this place, and killed some of the workmen, and the place was abandoned. After reestablishment of the garrison in 1816, I assume Crafts, according to Hubbard's letter, took possession of the place and fixed it up, and made it the site of his 5112 trading establishment. Lee's occupancy was terminated by the attack of the Indians in April of 1812. Leo was killed in the Chicago massacre a few months later. Craft's establishment was absorbed by the American Fur Company, and the particular post abandoned, some years later the place was temporarily occupied, I believe, by individuals coming into this region as emigrants; and I think the Galloway family.

5113 My attention is directed to my statement, at transcript 4098 (Abst., 1548) that "Professor Alvord stated that in letter five that Ogden speaks of being on the river; I am unable to find any statement to this effect in the letter."

My attention is further directed to Ogden's letters, page 48, the paragraph beginning "The new emigrants," and so forth, and the third sentence "However, I have reason to believe, if the fire was kept out, that these savannas would grow up and timber again, for in several places I observed where the fire had made such ravages, that small studdles of 5114 hickory were growing very thrifty." Page 47: "The prairies, on this river, are numerous, and many of them are very large, extending farther than the eye can reach; and some of them for sixty or seventy miles. These savannas or prairies," and so on.

I see nothing in these passages to show that Ogden was on the Illinois river. Alvord's statement was that Ogden was on the Illinois. Alvord was perhaps ignorant of the fact that one of the passages read was copied by Ogden from Harding's tour; the other from Miller's pamphlet. I suppose 5115 we might draw the deduction that he had been on the Illinois river. If one were to assume that Ogden was telling the truth, that his work was not plagiarism, it would be a reasonable and probable deduction that he was on the Illinois river; however, I see no specific statement to that effect. The savannas he was writing of, I presume, were along the Illinois river, but that is not directly stated, or at any rate, that the particular place where he saw the small studdles growing very thrifty was on the Illinois.

5116 This letter of Ogden's is taken from Miller and Harding together; the first part of the letter from Miller. That is where he says: "The Illinois is the largest that is peculiar to this state. It is a noble river," and so on.

5117 Aside from what I put into the record about Miller there is an estimate in 12 Sabine, page 173, under the heading of Miller, which refers to this pamphlet, from which Ogden plagiarized the first part of this letter. It says: "A small volume of much rarity but of *little use*."

5118 As to whether the comment just referred to does or does not help us very much as to whether Ogden ever made these trips which he purports to describe, I will ask counsel if he wishes to be more specific in his question or shall I take it just as he has given it?

Whereupon counsel stated that he understood that Ogden's whole volume was describing a trip out west from the east somewhere down the Ohio river or up the Illinois, or up the Mississippi, and as he says it purports to show he came into the Illinois country at least.

The WITNESS. It is my opinion with reference to Ogden that if it can be proved, I am not yet prepared to prove conclusively that he never made any such trip, and further that if he did make such a trip he took a very strange way of describing what he saw at that time. That very statement that counsel has referred to a moment ago about the small studdles of hickory is obviously copied from Harding, and it is equally obvious that he did not copy it correctly, but

5119 that he managed to say almost the opposite of what Harding said on that particular point. I would have no confidence in the proposition that Ogden made a trip at all, although as I say, I am not prepared to prove conclusively that he did not.

As to whether writers do not sometimes make trips and then adopt the descriptions written by others of what they saw, as for example, Hutchins said he did that as to certain parts of his topographical description of Virginia, I would answer that to my mind there is an important distinction between Hutchins and Ogden on that particular point, Ogden does not say he had done so. It would be entirely a possible thing that Ogden actually made the trips but had printed descriptions from those of others, but not probable. I would like to call counsel's attention in this connection, if I may, to this point as throwing light upon whether Ogden had made

certain trips or portions of trips he claimed to have made or not. I will point out that Ogden proceeds to describe 5120 the Savannas on the Illinois, copying Harding, and then applies that description to the American bottom, which is fair evidence, though not conclusive, that he had never been at Cahokia or Kaskaskia, and had never seen the American bottom. If he had, by the wildest stretch of imagination, he could not have spoken of savannas extending 60 or 70 miles in breadth as being on the American bottom. My opinion is that if Ogden made the trip he took a strange way of describing it, and that it is extremely improbable that he ever made any such trip.

5121 Replying to the question as to whether La Source failed to use the river for lack of water, or whether I think he failed to use it because of some other reason, do not think La Source has taken trouble to state specifically why they made the last thirty leagues by land. He shows they reached Chicago on Maundy Thursday; that it rained during the last two days of their march. I would presume it may have been excess of water, if it was due at all to the stage of the water that caused them to make the thirty leagues by land. I suppose it is conceivable that they cut across the country to avoid the Indians. I am ignorant of the fact at this moment.

5122 The Miamis were on the southern end of Lake Michigan. Am not aware this would properly be considered reason for abandoning the Desplaines or Illinois, or making a journey as this, for in going down, the St. Cosme party, of which La Source was a member, had not avoided the Desplaines for this reason. In describing the up trip, he mentions the threats by the Indians, but says, in that connection: "we are a strong party and not in the humor of letting ourselves be plundered."

La Source's statement that occurs here is "We were 5123 thirty men to descend the river of the Illinois." Assuming they had the same party coming up, that would illustrate how many men he had. Have no knowledge from other sources.

5124 My attention is directed to Pattin's report referred to by me at transcript page 4156 (Abst., 1567). Pattin says it is 150 leagues from the opening of Lake Michigan to Chicago river. That does not seem clearly inaccurate. He says up the Chicago river they sailed three leagues to a

portage of a quarter of a league. The three leagues
5125 might be open to question. It is usually stated as two.

Probably neither two nor three would be exactly accurate. The length of portage is subject to interpretation, because sometimes it was a quarter of a league and sometimes much longer.

Coming to the Illinois, which is the modern Desplaines and down this 130 leagues to the Mississippi; speaking generally, and not taking into account the sinuosities, I suppose that would be a reasonably accurate statement for the period to which I have assigned it. Anybody's description of the route at that time, could not vary very much from the figures, if the figures were accurate, and the describer

5126 was approximately so. I think Pattin simply copied the Logan report. He evidently had knowledge of the Logan report, and had it before him when he made this statement, otherwise it would have been as surprising as the telephone operator's remembrance of Mr. Hines' conversation, recently described in the papers.

Pattin does not include in his statement details found in Logan as to there being two in breadth, and of great depth, referring to the Straits of Michillimackinac. That does not go at all to affect my opinion that Pattin was copying the Logan report. We would expect minor differences, unless copied literally.

There is no mention in Pattin of the fort at Chicago,
5127 while there is by Logan. There are some minor differences in the language of the two statements, such as would be expected from copying any report not literally. Pattin was describing two routes from Mackinac to the Mississippi. There was therefore, no particular necessity for his describing the fort at Chicago. It may be that Pattin was aware there was no fort there. Though I do not pretend to know what he may have had in mind in omitting or including a word or detail, I believe the report is full of inaccuracies, and misstatements.

5128 In looking at transcript pages 700 to 702 (Abst., 290), I believe that has been made evident by Professor Alvord.

5129 In connection with Warden, I used the Century Dictionary, picking out such rivers as I could readily find concerning which there appeared something, both in Wardens and in the Century, and cited it as one line of evidence

that the statement of the early writers in reference to such things were often erroneous.

Upon the request of counsel, I read from the Century Dictionary as follows (reading):

"Fox or Neenah. A river in southeastern Wisconsin. It flows through Lake Winnebago, and falls into Green Bay, Lake Michigan. Length, about 250 miles.

Wisconsin river. A river in Wisconsin. It rises in Lake Vieux Desert on the border of Wisconsin and Michigan, flows south and west, and joins the Mississippi near Prairie du Chien. In its course are several cataracts, including Dalles of the Wisconsin (which see). Length about 600 miles; navigable from Portage City."

5130 My attention is directed to my statement about Winsor transcript 4181 (Abst., 1576) which begins "Winsor was not unaware of the modern name of this river," and so on, to the end of the sentence ending "I use the term in the modern sense."

Referring to transcript 354 (Abst., 165) paragraph 2, the statement beginning, "This appears in the earliest maps, Joliet and Marquette" and so on, I understand to refer to portage by the Chicago at the southwest of Lake Michigan to the Illinois, thence to the Mississippi. I suppose the route referred to by Joliet and Marquette was the one they took in their expedition, which was evidently in part at least by the Desplaines.

5131 Whereupon the witness' attention was directed to page 355 (Abst., 166) of the record where occurs the following passage by Winsor:

"James Logan, in a communication which he made in 1718 to the English Board of Trade, as running from the lake three leagues up the river, then a half league of carriage, then a mile of water, next a small carry, then two miles to the Illinois, and then one hundred and thirty leagues to the Mississippi. But descriptions varied with the seasons. It is usually called a carriage of from four to nine miles, according to the stage of the water. In dry seasons it was even farther, while in wet times it might not be more than a mile; and, indeed, when the intervening lands were 'drowned,' it was quite possible to pass in a canoe amid the sedges from Lake Michigan to the Desplaines, and so to the Illinois and to the Mississippi."

As to whether taking into consideration that passage and also the maps of Joliet and Marquette and the various later maps repeated in Hurlbut's Chicago Antiquities, I would not say that Winsor refers to a route of which the Des-
5132 plaines was a part, will say I would suppose that this will
quickest get at what counsel is asking about, I do not understand that Winsor is making any statement as to how much of the Illinois route as continued by the Desplaines was in use, or in what way it was used. In a general way, he is dealing with this route from Lake Michigan to the Mississippi. I call attention to the maps in Hurlbut's Chicago Antiquities referred to by Winsor in the statement on transcript 354 (Abst., 165, 166).

I would say the drawer of Franquin's map of 1684 did not intend to represent the passage as between the present Chicago river, and the present Desplaines, or else he was almost ludicrously uninformed as to the geography of this region. It seems reasonably evident that the portage that would be made, basing my statement on the map itself, would be from the present Chicago to some other river than the present Desplaines.

5133 The production of Lahontan's map of 1703 shows no Desplaines whatever. Obviously the portage, if made, would be from Lake Michigan, or the arm of Lake Michigan, which is here labeled Chicagou, to the Illinois river proper.

Delisle's map of 1700 shows no Desplaines river. The portage would obviously be from the river at the southwestern corner of Lake Michigan, which may be Chicago or something else, to the Illinois river proper.

Delisle's map of 1703 has no hint of the modern Desplaines. Any portage would have to be from the Chicago river to the Illinois proper.

Senex' map of 1710 shows no Chicago river. There is a rudimentary stub of a river flowing into the Illinois which may and presumably might be taken to represent the modern Desplaines.

In Delisle's map of 1718, the portage would be from the modern Chicago to the modern Desplaines.

Moll's map of 1720 shows no hint of the Desplaines
5134 river. Basing my answer on this map, would be compelled to say that the portage was from Lake Michigan or this projection of Lake Michigan toward the south, to the Illinois river, or whatever he means to indicate by this river, near whose junction with another stream is located Fort

Crevecoeur. That this Moll map in the general layout resembles Lahontan's map pretty closely was my understanding and what I sought to show on my direct examination. Basing one's answer on Popple's map of 1733, one would suppose that the portage was here and there along the way from the modern Chicago to the modern Illinois or Haukiki. It is not clear that Popple was aware of the existence of the Desplaines. This map is very inaccurate. The river further north may be the modern Chicago, and the one to the south the Calumet, if one assumes that Popple is acquainted with the geography of the country.

5135 The word Chicagou appears at the bottom of the lake, and up in Lake Michigan at the mouth of this river to which I referred, are the words "R. Chicagou," but the representation of the other river is more like probably the modern Chicago than the representation of this river is like the modern Chicago.

In Charlevoix map of 1744, it is not clear whether the portage was from the Chicago to what we may assume was the modern Desplaines, or from the Chicago to some other branch of the Kankakee river.

Bowen's map of 1752 apparently is but a copy of Charlevoix map of 1744.

D'Anville's map of 1755, the portage is presumably between the modern Chicago, and modern Desplaines or what we may take to stand for modern Desplaines.

Mitchell's map of 1755 is, I suggest, a copy of the D'Anville map of 1755, or more likely each of them copied this portion of the map from some common prior map.

5136 The same observation as to the portage-applies to this as to the D'Anville map of 1755.

Carey's map of 1818 is as inaccurate as many we have gone over and shows no portage at all. If one undertakes to base an opinion upon that, he would probably assume that the portage is between the Fox river and the stream which seems to have no particular beginning or ending, but which stands with fear and trembling for the Calumet, and is named the Kickapoo. Concluding my answer, it would be extremely hazardous to infer from this statement that Winsor was pointing out anything in particular as to the use of the modern Desplaines.

5137 The passage on transcript 355 (Abst., 166), heretofore called to my attention, at transcript 5131 (Abst., 1881),

does not leave much in doubt that what Winsor had in mind was a portage between the Chicago and Illinois rivers; sometimes it would be the Desplaines; sometimes it might be to the Illinois, probably. He says: "It was usually called a carriage of from four to nine miles," which is simply saying here what the statements or descriptions are. I do not understand that he himself stated that as his own conclusion. "In dry seasons it was even farther, while in wet times it might not be more than a mile."

5138 I would presume that that may be Winsor's own conclusion.

I suppose the grain spoken of in Woodruff's History, pages 607-608, transcript 4186 (Abst., 1578), as going down the Kankakee, and up the Desplaines was shipped from some 5139 point on the Kankakee. It was a short distance up the Kankakee from the junction with the Desplaines. It was across a portion of a county.

The stage road spoken of by Woodruff in his article 40 years ago referred to by me at transcript 4186 and 4187, was a route from Chicago to Ottawa, and Woodruff says it went by way of Plainfield in the beginning, which is on the DuPage river, but that by 1838 or 1839 was changed so as to go from Ottawa to Chicago, directly up the west side of the river; that is the west side of the Desplaines, leaving Plainfield out in the cold.

5140 This grain was said to have been shipped in 1834.

I assume no responsibility as to the fact whether it was shipped or not. At the time Woodruff says the grain was shipped, the stage route was across country quite a little distance from the Desplaines.

5141 If the grain was shipped, and if Woodruff states it was shipped, if it went up the Desplaines river when

5142 the stage route went through Plainfield, the Desplaines would be from nothing to several miles from said route. Plainfield is on the DuPage river, approximately due west of Lockport. Without measuring upon the map, I would suppose it was a township and a half or in the neighborhood of nine miles west of Lockport, and near the Desplaines. The ultimate destination of the stage route was Ottawa. If the stage route went down the DuPage, it would come to the point on the Desplaines where the shipment of grain from the mouth of the Kankakee upward would strike the route. If the stage route went in some other direction, it would not.

I understand the point of shipment of the grain was
5143 some little distance up the Kankakee, from its mouth
or junction with the Desplaines, being in Custer Town-
ship in Will County, or from the mouth of the Kankakee and
Desplaines approximately diagonally across one township.

In further explanation of my proposition, did not sup-
pose grain was to be shipped by the stage route or that it
was unreasonable to presume it was not shipped by stage
route. My proposition was that if they were in the habit
of shipping grain down the Kankakee, and up the Desplaines
to Chicago in heavy loads, such as Woodruff indicates, it
would be exceedingly strange that they would ship nothing
else along the Desplaines to and from Chicago, or that
5144 Woodruff would speak in his lecture in the terms as
he did of the significance, and the change in condition
and so forth from the opening of the canal. The statement
in Woodruff's history is "As early as 1834 the products of
the farm were boated down the Kankakee to the Desplaines
and up the latter river to Chicago." And then goes on to
give a specific instance.

As to whether there is any inconsistency between that
statement and the fact that there was a stage route over
through Plainfield and down through Ottawa to Chicago, I
would say the stage route was changed to go straight down
the bank of the Desplaines according to Woodruff's lecture,
and still the opening of the canal produced a revolution in
the relations of Joliet to Chicago. That was the point I had
in mind and to which I undertook to call attention.

As to whether there is any inconsistency in my judg-
5145 ment between the statement of Woodruff and the fact
that there was a stage as described, I would say I
think I have pointed out where it seems to me the improbabil-
ity consists.

Q. I mean the mere fact that there was a stage route
would not of itself be inconsistent with the fact that these
people over on the Kankakee river somewhere might have
undertaken to ship products to Chicago by water?

A. But counsel seems to overlook the fact that I did not
make that the substance of my argument on this particular
point.

Q. Supposing you did not. I am asking you about this
particular point.

A. They might use the stage route and they might also

use the river if the river was capable of use. We would hardly expect them to ship grain up the DuPage river to Chicago, if that was counsel's proposition; but that was not my proposition at all, as I have pointed out.

Q. Do you find any inconsistency between Woodruff's statement found at transcript pages 4186 and 4187 (Abst., 1578), "that hitherto goods had been transported from Chicago chiefly by ox teams drawing the old Pennsylvania canvas covered wagons," and the statement in Woodruff's history about the transportation of this grain and so on up the Desplaines river?

5146 Objection; incompetent, irrelevant and immaterial.

A. As pointed out in my direct, it seems to me the account in Woodruff's life, to which reference is had in this question, is rendered improbable by the account in Woodruff's lecture on Joliet and Will county, Forty Years Ago.

Motion to strike out, as not responsive.

It is not impossible, of course, that the thing might
5147 have been attempted as stated in Woodruff, page 607.

Q. Do you think it impossible that a boat carrying a tonnage described by Woodruff could have used the Desplaines in the spring time, say, or in time of high water?

Objection; incompetent, irrelevant and immaterial.

A. The Desplaines may well have been deep enough in time of high water for a boat, such as one may presume this statement had in contemplation, to have floated on it. It would doubtless not be impossible, assuming the water were high enough. I think it clearly improbable that this operation was carried out. The statement is "As early as 1834 the products of the farm were boated down the Kankakee to the Desplaines and up the latter river to Chicago." A reasonable interpretation of that, makes it a general statement, for when he points out the specific instance,

he makes it evident that at that time they did not go
5148 up to Chicago, but were stranded around Treat's Island.

Therefore, the first statement does not refer to the specific affair described immediately following. Do not believe they were in the habit of boating farm products in such loads as described up the Desplaines to Chicago in that period. They may have boated them. It is not impossible. They may have undertaken to take a boat and been swamped, at Treat's Island, as the specific account makes evident on this occasion they were.

To make a correction, this grain was shipped from Sugar Creek, a tributary of the Iroquois, instead of Custer 5149 Township. It is perhaps thirty-one miles from the mouth of the Iroquois to the mouth of the Kankakee.

Referring to the map entitled "Amerique Septentrionale Devisee en Principal Parties," being number 9 of Chicago Historical Collections, would not care to base an answer on my general knowledge of the cartography of the country.

Carey's map of 1818 was more incorrect in some respects than many of these maps of one hundred years or more prior to that date. I think the man who finally has been responsible for the map is Hubert Jaillot.

5150 Winsor's Narrative & Critical History shows that Jaillott was Royal Geographer of France in 1736. There were several Sansons. The map does not state which of the Sansons this reproduction by Jaillott is based upon. The cataloguer has located the date of the map as 1692. I would not undertake to fix the date of the map without an opportunity to study it.

Winsor, Volume 5, page 79, of the Narrative & Critical History, states that the plates and maps of Nicholas Sanson, who died in 1667, were in possession of Jaillot toward the end of the century, who published in Paris in 1692 what passes for Sanson's Amerique Septentrionale. This I presume may be the map counsel has shown me. He says it passes for Sanson's map, but with adaptations to contemporary knowledge of American geography. This agrees with the cataloguer, or 5151 whoever has located the map by writing under Jaillott's name the date 1692.

I presume I have never taken any special course in cartographical history of this country, in the sense in which counsel puts the question. I presume I have made a study of it. Could hardly study history without studying cartography. I do not know just what is meant by special 5152 study of cartography. Can point out that it goes hand in hand with history, and having made some study of American history I could hardly divorce that from a study of cartography. There may be special courses in universities. I have not taken any such special course as counsel indicates in any special university. Most histories deal to a greater or less extent with cartography. I could hardly indicate all the histories I have used.

As to whether I have ever studied work which deal specially with cartography, I should say that Winsor's Narrative and

Critical History and the various works in the other series of Winsor deal very largely with cartography, American cartography.

As to whether I have studied them, I will say I have used them, I suppose counsel knows that without asking the question.

5153 As to whether I have studied anything else that I recall that especially treats of the cartographical history of this country, I would suggest that Phillips' Lists of Atlases and the other volumes in that work have something to say about the cartography of the American History of America. It gives a list of the maps in the Congressional Library, or something of that sort with additions.

As to whether I have used it, I would say that I have shown on the direct examination that I have used it. It is a reference work. One does not read it through any more than one reads the dictionary through.

Counsel says he gathered the impression from what I said that it was a work that a historian interested in cartography would sort of study, and that perhaps he was wrong about that.

I suppose counsel was talking about the cartography of America.

I should think if a historian was very much interested in the subject he would have occasion to use Phillips.

As to whether I have become familiar with most of the maps mentioned in Phillips' List, that is the maps of North

America themselves, I would say I have just indicated in

5154 what way I have used Phillips. He has a great long list there of maps of North America, of all the maps in the Library of Congress up to the time the work was prepared, which was a few years ago; also of all the atlases in the Library of Congress. There was quite a considerable number of these maps. Some of the maps I am familiar with and some I am not.

As to whether I am familiar with any of the early maps of this country except those that I have referred to in my direct examination, I would say I presume I am. I have read through, I think, all of the volumes in Winsor's series, the Westward Movement, Carter to Frontenac, and the other volumes in the series. I have made very considerable use of Winsor's Narrative and Critical History. As I pointed out in answer to one of the questions the other day, I shall not undertake to tell counsel all the contents of these various

volumes. I do not pretend to carry these things in mind and I do not think any reasonable individual does pretend or attempt to.

These maps to which I have referred on my direct examination, some of them I had seen and some of them

I presume I had not. I am unable to answer definitely from memory.

When I made that answer I assumed that you were about to state, before I became interested in this case.

About this Sanson map that I have before me I might perhaps answer by reference to my notes. I am not clear whether I could or not. I will say in a general way that I think I had gone through all of the maps in the Chicago Historical Society Collection, that seemed to me to have any bearing on early Chicago history. In that connection I will call counsel's

attention to a few notes if I can readily turn to them at this moment. I will say for the record that in connection with the work I was doing on the early history

of Chicago I undertook to go through all of the maps in the Chicago Historical Society Collection that seemed to me to give promise of throwing any light upon the early history of Chicago. That I have a considerable number of notes which I have taken on those maps, as I recall it something like a score or so in number; and that I suppose at this moment that since I began my study of this case I abstracted those notes from their proper place in my index and have evidently failed to return them, for at this moment I am unable to turn to them.

I will call attention merely then in this connection to two that I happen to have noticed in this way; one is a reference to a treatise on the maps of Early Chicago in Hurlbut's Chicago Antiquities. Those maps I believe we were going through yesterday. And another is a reference to a particular map in Blanchard's History. At the present time until I, or unless I should happen to locate the notes, I would let the answer rest at that point. As to whether I have ever delivered any lectures on the cartographical history of this country, or any part of it, I will call counsel's attention to the fact that teachers of history use the term "lectures" in a way that may not be recognized outside of a class room. To say what I have done in the way of teaching cartographical history, I would say that I have been teaching history at the Lewis Institute for three years, and as I have indicated, prior to that one year on half time, that is

to say, teaching half the regular work of a full instructor at the University of Chicago. In connection with teaching history, as with the study of it, one necessarily makes use of maps and undertakes to lead his students to make use of them. In that connection I have handled the subject of cartography.

Am not in the habit of giving at Lewis Institute what McLaughlin would be likely to denominate a lecture on history, but for convenience we use that term there. That is to say, that when the instructor gives a talk to the class, which may be more or less formal, and occupy a portion or all of an hour, we call it a lecture, and in that connection naturally handle geography.

Have never written any treatise on cartography that I am aware of. I have written in my own work.

Have not made any great study of this Sanson map, and do not care to undertake to state what the sources of the map are.

Have called attention to Winsor's remark as to Jaillot's obligation to Sanson, which is evident from the title of the map itself. I introduced it not to show Jaillot's knowledge but rather lack of knowledge of certain things, and that the term Chucagua was applied as indicated on the map.

5159 As to whether I would not say from my general knowledge of history and especially of cartography that the map of the southern portion of this country was based on Spanish sources, I would say I have just indicated that I would prefer to study the map before I undergo a detailed examination upon it.

As to whether I made investigation to find out the source from which the term "Chucagua" on that map was derived, I will say I have shown on my direct examination and on my cross-examination that I did not make an extensive study of this map, and that it was not pertinent to my purpose to do so.

As to whether it is my understanding that this river down here, the river called the Chucagua was meant by the map maker to be the Chicago river as he understood it to be located, I would say that this particular map maker did not understand the location of the modern Chicago river, if indeed he knew there was such a river. I called attention to the name of the river because of its evident similarity to what

has come to be the modern name Chicago, which has
5160 been variously spelled at various times by various individuals who have used the term. I would suppose that this river is intended to stand for the modern Mississippi. I do not know what name DeSoto used.

My attention is directed to volume 2, page 450, of Pierre Richelet's translation, the full title being "Histore De La Conquete De La Floride ou Relation de ce qui S'est passe dans la Decouverte de ce Pais per Ferdinand De Soto; Com-
posee en Espagnol par L'Inca Garcillasso De La Vega,
5161 & traduite en Francois. Par Sr. Pierre Richelet," published in 1731. The work is in French. Glancing at the passage counsel indicates, I presume it states that DeSoto was buried in the Chucagua river. I note on page 450 the sentence which concludes, "And to give for him a tomb, the Chucagua."

I understand DeSoto was buried in the Mississippi, and I suppose it will satisfy counsel if I say it refers to the Mississippi river.

I am not a student of Indian languages and dialects, except incidentally in connection with one's study of American history.

5162 Q. It might very well be, might it not, that Indian names spelled with considerable similarity might differ very materially in their meanings, might it not?

Objection; incompetent, immaterial and irrelevant.

5164 A. Would say that each may spell the Indian name as he pleases, at least until there has come to be an established custom or agreement as to how it shall be spelled. Indian sounds often times have no exact equivalent in English, French or Spanish, as the case may be, and if they have, the white man often times misinterprets and only approximates or thinks he approximates the Indian sounds. I believe there are something like forty spellings in all that some industrious individual has assembled for the word "Chicago." I have an impression of the Indian word "Chi-
5165 kakas," appearing on one of the maps. I do not remember which one. The name was located somewhere in the region of the modern Tennessee. If that impression is correct, I suppose it may have been the equivalent of the modern Chickasaw.

Whereupon counsel for complainant called the attention of the witness to a map entitled "Facsimile of the Auto-

graph Map of the Mississippi or Conception River drawn by Father Marquette at the time of His Voyage, from the original preserved at St. Mary's College, Montreal," of 1673, and directed the witness's attention to statements at pages 192 and 193, proceedings of Wisconsin Historical Society, meeting of October 18, 1906, Madison, Wisconsin, 1907, quotation being from an article by Louise Phelps Kellogg, 5166 Ph. D. entitled "Marquette's Authentic Map. Possibly Identified";

"Summing up the evidence already presented, we arrive at the following conclusions:

First, that the holograph map of Marquette in the College of St. Mary, in Montreal, was the one made in preparation for the voyage, and has no value in showing the results of the discovery of 1673.

Secondly, that the map in Harvard University Library known as 'Parkman No. 5,' is a copy of the prototype of the one published by Thevenot in 1681 as embodying the results of the expedition of Joliet and Marquette.

Thirdly that the original of 'Parkman No. 5' is an authentic work of the explorers; and instead of being 'crude and careless,' is exceptionally accurate in delineation of the region explored, and entitled to high rank among the early maps of the Great west.

Finally, that while the authorship of the original, of which 'Parkman No. 5' is a copy, cannot positively be asserted, indications are sufficient to warrant the supposition that this was a genuine map of Marquette, prepared by him to embody the results of his voyage of exploration—possibly intended to accompany his official report to the Jesuit authorities in France, and as 5167 such one of the two first maps ever drawn of the Mississippi River and its tributaries."

Whereupon witness asked for the reading of the question, which was thereupon read as follows:

Q. It is my understanding that that map was prepared by Joliet and Marquette prior to their exploring expedition, is that right?

A. I interpret it to be Miss Kellogg's conclusion in reference to the matter.

As to whether I am familiar with that work, I will say I think I have looked over this article. I have not in mind all of its conclusions or any considerable part of them at

this time except as I now have it before me. I have seen the article before, I am sure. I suppose Miss Kellogg would be a better authority on that point that I would be at the present time. The map itself does not show what is apparently 5168 a continuous waterway from Lake Michigan down to the river. It seems to show a slight break there up near Lake Michigan.

Whereupon the attention of the witness was directed to the map entitled "Reduced Facsimile of Parkman No. 5," opposite page 184, proceedings of State Historical Society of Wisconsin, heretofore mentioned. Without assuming any responsibility as to this map, I think it indicates a portage between the modern Desplaines and the modern Chicago river. I consider it an incorrect map. Without stopping to look up its history, I believe it is generally so considered by historians.

It shows the return of Joliet and Marquette on this expedition by quite a different route than we understand 5169 from the narrative, and than we have agreed to in our testimony in this case.

Winsor's Narrative and Critical History has this to say about it (page 220): "Parkman has a copy of it and calls it so crude and careless, and based on information so inexact that it is of little interest." My remarks are primarily based on the fact that the map shows a route extending from the Mississippi to the Illinois, designated as "chemin de retour."

The witness then read as requested by counsel for complainant from pages 185 and 186 of the Kellogg article heretofore cited:

5170 "There are, however, reasons for differing from this opinion. Parkman's condemnation of the map would seem to be based upon two lines indicating trails—one following the general course of the Fox-Wisconsin route, and designated 'chemin de l'allee' (outward route); the other, striking across country to Lake Michigan from a point on the Mississippi between Rock and Des Moines rivers, and labelled 'chemin de retour' (return route). Parkman assumed that these trails were intended to indicate the outward and return routes of Joliet and Marquette. If so, they are manifestly incorrect; but there is nothing on the chart itself to indicate that such was the intention. Rather are they meant to locate two great Indian trails which from time immemorial have followed those very routes. The outward trail follows the much used Fox-Wisconsin water course, necessarily crossing

it several times; but by no stretch of the imagination could this be intended to indicate the course of travellers by water. The return route follows an ancient trail from the Peoria village near the Des Moines to those of the Kaskaskia on the Illinois. This trail was later abandoned for that known as the 'Old Sauk' running somewhat farther north. 'Chemin' was the usual French term for an Indian trail."

5171 So far as I know, Miss Kellogg's is the most recent publication on the subject. I do not know how it has been received by historians, aside from this observation in this case.

Joliet's map shows a portage or the word portage written underneath what one might presume was intended to stand for what we would call the south branch of the Chicago river. It shows river Devine or L'Outrelaize, a large stream comparable with the Ohio, or some such stream as that, the upper portion of the Mississippi, which is continued by certain branches or tributaries of much smaller size, and these, or one of them, at any rate come somewhat close to the large branch to which the term portage is applied. One of these branches runs up on the map, and almost touches the continuation of that branch of what we take to be the south branch of the Chicago river. That stream does not, in fact exist, however, according to my understanding of the matter.

5172 One might suppose that this stream, which flows into the south branch, if it is the south branch, was intended for the modern Fox or modern Desplaines. I suppose the fact is, Joliet, having simply passed through the country, drew this map from memory, and had never been up that stream, which he here represents.

In reference to Joliet and Marquette, it is my opinion they made some such portage as this. The map would be fortified by the narrative of the journey. The map alone would simply show that Joliet's representation of the water routes in this region was very incorrect, but that he meant to indicate
5173 a portage as I have undertaken to describe is indicated on the map. The approximate date of these three maps is about 1673.

I see nothing to indicate that Sanson used Marquette's or Joliet's accounts in preparing his map.

5175 Whereupon counsel for complainant directed the attention of the witness to the map referred to at transcript 99 (Abst., 42), as the Hennepin map, which is found in

"Descriptione De La Lousiane," Paris, 1608, stating that it showed a large stream running down from the southeast corner of the lake designated Lac Illinese; another stream approaching from or arising near that large stream, running down from the southeast corner, and flowing in a westerly direction to the Mississippi, and the word portage partly on one side and partly on the other of the stream, running from the southeast corner of Lake Michigan and underneath the stream flowing to the west.

5176 The WITNESS. Without stopping to verify it, I would suppose this is the original Hennepin map of 1683. Evidently this map is from the older plat, and that some additions and changes have been made in it.

Whereupon counsel for complainant directed the attention of the witness to another Hennepin map referred to at transcript page 100 (Abst., 42), and found opposite page 22 of Thwaites edition of Hennepin's *A New Discovery of a Vast Country in America*, stating that it differed from the other map, showed a stream running from the southerly part or southwesterly part of Lake Michigan, and another stream rising near it, and flowing to the west, connecting with the Illinois, or something that might represent the Kankakee.

5177 The WITNESS. I presume it might. It shows a portage between the two rivers that counsel has just indicated. The Illinois river is indicated as having three tributary streams; the middle one, I suppose counsel referred to as the modern Kankakee. From the upper portion of this stream to that flowing into Lake Michigan, at the southern end is represented a portage, the word "portage" written at that place.

5178 I think it equally probable that the middle one of the three streams was intended for the Kankakee.

My attention is directed to a map, entitled "*La Amerique Septentrionale*," etc., by G. Delisle, dated 1700.

5179 The Fox-Wisconsin is represented as one continuous stream. I see no portages represented on the map in this portion in which we are interested. I understand the cataloguer has fixed the date of the Chicago Historical Society Collections map No. 16 (Sanson-Jaillot) as 1719, as indicated by lead pencil notation. I made no effort to fix it, one way or another. This map has approximately the same title as the Sanson map, No. 9, of the Chicago Historical Society Collection, recently under discussion, therefore my

inference from the title as to the date of them may not prove to be valid.

Nicholas Sanson, whose plates were in the possession of Paillot, died in 1667. This map *Amerique Septentrionale* is dated 1692, Winsor, volume 5, page 79, who says it was re-issued at Amsterdam not long after and that the plate was long in use in Amsterdam, and that he had noticed reissues as late as 1755 by Ottens.

I presume it would require some time to locate absolutely this particular copy of the map. It might be by the use of Phillips I can do it. The index of Phillips under the name Sanson, fills approximately a column and a half. It would doubtless require considerable time to settle this matter. I am prepared to undertake it if counsel wishes me to.

Whereupon witness was directed to locate it.

The WITNESS (continuing): I would suggest that if counsel has located the date it might save time to give me the reference. Whereupon counsel stated the only thing he had in mind was what he had shown in Phillips.

The WITNESS (continuing): I would say in reference to this question that a map of this title was first issued in 1692 and 1696, and appears to have been reissued at different times in the years after this period. I think it would be impossible to say at what time this particular copy was put out. I have not looked through all the column of maps listed under this name in Phillips but I presume that this would be the result of such an investigation.

Winsor shows in his reference to this map that various editions were made to it to bring it down to the contemporary knowledge at the various times that it was re-issued.

My attention is directed to Lahonton's map, appearing in Thwaites' edition of Lahonton's *New Voyages to North America*, opposite page 146. The words "Land carriage of Chekakou," appear on that map to the north of the Illinois river, north of Fort Crevecoeur, and running in general east and west from that point over toward the southwestern point of Lake Michigan and then back toward the west to a point which may perhaps be taken to indicate the central part of the State of Illinois from east to west.

5183 The southern end of Lake Michigan is represented as terminating in a projection similar to a sharp point which

might perhaps be described as a bay. In my mind "Land carriage of Chekakou" applies to the space between the southern end of Lake Michigan and the Illinois river.

5184 The word "of" is due west of the southern point of Lake Michigan as represented here, and due northwest of the space between that point and the Illinois river. Of course, a part of the letter "F" is the west part of that open space.

My attention is directed to Delisle's map of 1703, being No. 12, Chicago Historical Society Collection. It shows the word "portage" at a point, which I would take to have been intended to indicate the Fox-Wisconsin portage. It shows the word "portage" on a river south of Lake Erie, designated as Wabash, and otherwise as Ohio or Belle Riviere. I take it to mean the modern Ohio, and not the Wabash. There is a portage at that point apparently from a river which flows into the southwestern end of Lake Erie, over to the Ohio. The portage is written on the southeast side of the Ohio river.

5185 There is a dotted line running from Lake Michigan or a point on the Chicago river in a general westerly direction to and along the river la Roche, and then continuing on up the Mississippi. That dotted line is scattered pretty generally over the map, however. It is not intended to show a portage. The Fox-Wisconsin waterway appears to be represented continuously.

My attention is directed to DeFer's map of 1705, from 5186 the University of Illinois collection. Waiving the question as to the accuracy of this map I presume the word portage and the two dotted lines form the Fox to the Wisconsin rivers represent what we know as the Fox-Wisconsin portage. It shows a portage extending from what may be regarded as a bay of Lake Michigan across to a river, which is the northerly of two streams, which come together and form a continuous stream, which at a lower point on the map is designated Riviere Divine ou Illinoise et de Segnelay. It shows a portage from a stream, the southerly one of two streams which come together, and as one continuous stream empty into the southwest corner of Lake Erie, extending from that point to the river designated as the "Oubache river par la quelle en peut descentres dan selle de Mississippi."

5187 These portages are the three indicated in the same way as the two rows of dotted lines, and the word portage opposite them.

My attention is next directed to Carte particuliere, which is

substantially the same as Lahontan's map. It shows a portage of the same sort, but different wording. The point indicated is the same. This map is identified as being 5188 taken from Chatelain's Atlas. It follows page 82 in that atlas.

I would judge it is based on Delisle's map of 1703, being the map No. 12 of the Chicago Historical Society Collections; doubtless as far as the region around Lake Michigan is concerned. Have not examined the whole map.

My attention has been directed to a series of maps appearing in Chatelain's Atlas between pages 100 and 101. Do 5189 not recall having referred to it heretofore. The cataloguer has dated this map 1725, with a question mark. If that is correct, then map entitled "Mappa Geographica 5190 Retionem Mexicanam et Floridain," dated 1719 could not be based on it. The maps appear to have a common origin. There seems to be some slight differences between the two. I observed that Checagou, a place, appears on the map in the atlas and does not appear on the other map. Checagou, a place indication approximately at the site of the modern Chicago, I take it.

My attention is now directed to a map in Chatelain's Atlas, immediately preceding page 91. I have not the 5191 Von Keulen map before me. Speaking from memory the two maps are similar, so far as the portion around Lake Michigan is concerned, I judge they came from the same source.

5193 Winsor says the map was published at Amsterdam in 1720. I believe I called attention in the course of my testimony in reference to the Chatelain Atlas to the fact it must have been published earlier than 1720. The map shows a portage somewhere on the river St. Croix, near Detroit; also another portage in the same river. Am not clear what the portages are supposed to connect. It shows a portage between the Fox-Wisconsin rivers. Shows none at the modern Chicago. It shows one between a river that is labelled Riviere de Checagou, and the Wabash river, which is as we would 5194 say to-day the Ohio evidently. Shows a portage of the Miamias, which I take is between the source of the St. Joseph river, using the modern name, and the eastern end of Lake Erie; also a portage of St. Jerome, which I suppose is between the river flowing into the eastern end of Lake Erie and a branch of the river here called the Wabash, which we to-day call the Ohio. There is a river below labelled Riviere

d' Ohio autrement apelee Acansea Sipi, meaning River of the Ohio, otherwise called Arkansas.

5195 This map is exceedingly inaccurate in many respects.

I offer that to explain the statements I have been making about rivers and names.

The Delisle map, being No. 15, Chicago Historical Society Collection, dated June, 1718, shows the Fox-Wisconsin, the St. Joseph-Miami portages; it does not show the Chicago-Desplaines portage. Designates what we now know as the Desplaines by the name Chicagou. It shows a river going into the lake with two forks, which, considering the date of the map, we may agree shows the Chicago river fairly well.

As to whether that map was made during the period when there was very little trade going through this country, I 5196 would say the map was made in 1718. I believe I have indicated what my understanding was of the matter. Referring to Homann's map, the title of which indicates that it was based in part at least upon Hennepin, I will say I believe I did not qualify as an expert upon the Latin language, but I would not so read the title, basing my answer on a hasty sight translation of it. To give my translation I would judge that the title indicates that it was a map of the region called Louisiana which was discovered by Father Hennepin. It indicates what purports to be the route of Father Hennepin, I do not understand that the indication is correct.

5197 There is a good deal of similarity between this map and Delisle's map of 1718 and 1703. I presume the maker of the Homan map drew on Delisle to a considerable extent. Homan's map shows two routes for Hennepin between Lake Michigan and the Mississippi. This dotted line on the 1703 Delisle map seems to correspond with the southern one of these two lines on the Homan map, though the dotted lines run pretty generally all over the map. Evidently Hennepin had not traveled everywhere the dotted line goes.

Into Connecticut, for example.

5198 Bellin's map of 1744 indicates a portage approximately at the point of the Chicago-Desplaines portage. The words R. des Illinoise appear north above the line which indicates the northerly fork of the two streams which come together and proceed to the edge of the map, as it is depicted, and the name appears about half way on each side of the fork. I take it that the name River des Illinoise is immediately above the fork which we might take to be the junction of the Kankakee and Desplaines rivers. The south-

erly river of that fork is designated River de Theakiki, and the portage is indicated by a dotted line from the northwest of the Chicago river and the words Portage aux Chenes.

D'Anville's map of 1746, No. 20 of the Chicago Historical Society Collection shows no portages.

My attention is directed to Vaugondy's map, which bears a cataloguer's date of 1753, and the words Aves Privilege at the bottom of the map. It shows two rivers coming together, and continuing down to the southwest, and the main stream is labelled Riviere des Illinoise, and the northerly one of those two rivers is also labelled Riviere des Illinoise, and the forks where they come together is designated LaForche, and the southerly of the two rivers is designated Teakiki. The portage is indicated from what apparently represents the north branch of the present Chicago river, to the more northerly of these two streams which come together at a place indicated as La Forche by a dotted line extending from the north branch to that northerly river 5200 and the words Portage Aux Chesene. The representation on this map is the same as the D'Anville map of 1746, C. H. S. No. 20, or else they are both copies in common of some other map. It shows the St. Joseph-Kankakee portage, or a portage at what is known as the St. Joseph and Kankakee rivers today.

I perceive no portages on the LaRoche map No. 26 of the Chicago Historical Society Collection. It indicates a river called the Chicago, about where the modern Desplaines would be. Do not mean that it is correctly located. I suppose we may take it to represent the modern Desplaines.

Bellin's map of 1755 entitled Partie Occidentale De La Nouvelle France ou Canada Par Mr. Bellin Ingenieur de la Marine 1755, being No. 25 N of the Chicago Historical Society Collection of maps, shows two rivers coming together and forming the Illinois, indicating the place of junction as 5201 LaForche. The northerly of these two rivers is labelled

R. des Illinois, and the southern R. des Theakiki. It indicates a portage from the northerly of these two rivers, which come together, to what apparently represents the north branch of the present Chicago river by a dotted line, and the words Portage des Chenes. It indicates other portages as follows: Fox-Wisconsin, Kankakee and St. Joseph, St. Joseph and the Wabash; one between the Miami (modern Maumee) and the river flowing south into the Ohio; one between

Lake Erie and another river flowing south into the Ohio; one between Lake Erie about the middle point, and still another river flowing south into the Ohio.

As to the region around the lower end of Lake Michigan, this map seems to be a copy of the two maps which have been described or rather to be based on the same source as those two maps, the first one being Bellin's map of 1744 and the second the Vaugondy map of 1753, according to the cataloguer, and the third Bellin's map of 1755.

This is a reproduction of his own earlier map.

5202 One covers a larger country than the other does. The map of 1744 shows only a part of the country appearing in the map of 1755. I see no particular difference so far as the district is represented. The scale of the maps is different.

5203 My attention is now directed to map of the "Theatre of the present war in America drawn according to the new English maps of L. Dennis, geographer," etc., by his very humble servant Bassett in 1779, one of the university of Illinois collections. This indicates a river flowing from a point along the southwesterly shore of Lake Michigan with the words opposite written in the portion of the 5204 map representing Lake Michigan R. et Post Chicagou, and underneath that river is the word portage. It then indicates a river called R. des Illinois, running in generally a northerly and southerly direction past this point perhaps about one-sixth of an inch from the western end of the Chicago river, as indicated on the map. It also shows a river called the Theakiki running in a westerly direction or slightly southwesterly direction below the Illinois. The map shows parts of these two rivers, the Theakiki and the Illinois.

My attention is directed to Moll's map of 1720 which appears to be based on Lahontan's, so far as the region 5205 around the southern end of Lake Michigan is concerned.

Q. As to that region how does it compare with these later French maps to which your attention has just been directed?

Objection; incompetent, irrelevant and immaterial.

A. As to the region around the southern end of Lake Michigan, the Illinois river, and so on, I would say that 5206 neither of the maps are accurate. There might be an honest difference of opinion as to whether Moll's map, or Bellin's map, more nearly approximate the correct representation of the general geographical features of the coun-

try. Moll's map shows a very small stream for Chicago river; Bellin's map shows a considerably longer stream, and neither one of them is accurate.

As to the Illinois river, up to the farthest point north, which the Illinois river reaches on the Moll map, am inclined to think it is more accurate than the representation on Bellin's map. Moll, however, shows no Desplaines river, while the Bellin map shows one which apparently corresponds with the Desplaines. Bellin represents the Kankakee and Illinois as flowing in an almost straight line from the source of Kankakee to Mississippi river. Moll incorrectly represents the Kankakee as flowing northwesterly, and represents the Illinois from the point where its northernmost point is reached, flowing in a southwesterly direction. On the whole, think it is more accurate in that respect than Bellin's.

5207 The river St. Joseph is shown with more correctness on the Bellin map. Green Bay is shown with approximately greater correctness on the Bellin map than on the Moll map. Moll represents Lake Michigan as trending to the northwest, and the southeast; Bellin as trending from northeast to southwest. References to modern map shows that neither is correct.

5208 Moll's map indicates the L. Carriage to the Illinese, which I take to apply to the space between the Illinois, at its northernmost point and Lake Michigan, and I believe these words appear at about the same position on that map as they did on Lahontan's. Have not Lahontan's map before me.

At the beginning of Popple's Atlas is a small scale map of a large portion of North America, the eastern half. See no portages on it at this moment. Baldwin points out from his study of this Popple map that the detailed maps are generally accurate with respect to portages.

5209 I believe he contrasts the detailed maps with those smaller general maps. Since there are no portages shown, I suppose one could hardly say it is inaccurate in that respect. Taking that more detailed map which I referred to on my direct, the east and west degrees are

5210 not indicated but the easterly line on the map runs from Lake Michigan and the westerly line, I suppose about seventeen degrees west of that. It shows a stream running between the river indicated, as the Illinois, in the lower part of the stream, and the Huakiki au Macaten R in the upper part of the stream, and a stream running out of the

southwesterly end of Lake Michigan, the connecting stream leaving the river about above the letter A in the word Huakiki. It is not entirely evident where one stream leaves the other. There is a continuous water connection evidently between them. A stream running into Lake Michigan, above mentioned, is designated R. Chicagou.

From Lake Michigan down to the Huakiki is a dotted line alongside of this water connection. The word portage appears on the western side of the dotted line, at a point where the water way between the two rivers, the Chicago and Huakiki connect with the Chicago; again below what apparently indicates a lake in the course of this waterway, and again at a point near the Huakiki river. The word "portage" occurs along this water route.

5212 See no particular point in saying that the words are on the dotted line. The dotted line runs parallel to the waterway. The word "portage" stands close to the waterway.

I believe that map was made for the British Board of Trade. People had access to the Board of Trade reports. Was issued under their patronage in 1732. The Board of Trade may have investigated trade in Illinois country, and western country to some extent. Do not care to say they made any exhaustive or thorough investigation.

5213 Logan and Kieth sent a report to the Board of Trade. Whether or not at the request of the Board, do not know. The great period of discussion in England of the trade in the western country came about 1732. No issue was joined until the French and Indian war 30 years later. Do not know when the period began as applied to the Chicago region. As to the Ohio valley, should say about 1740 or 1750.

5214 The date usually ascribed to the signing of the treaty of Utrecht is 1713. I know something of the British claims based on this treaty. On the spur of the moment, I call attention to Winsor's Mississippi Basin, page 331. He speaks of the preposterous claims the English set up, and shows how they gradually screwed their map papers up to the pits of audacity, where they reproduced and represented these preposterous claims. The British claims to this country arose at various times. About 1750 the British and French were ready to claim everything in sight in North America. That is not literally correct, of course. The French conceded something to the English as late as 1750, and the English never claimed Quebec.

Suppose Kieth and Logan's report had something to do with the trade in this region or with reference to this country. I understand, however, the British across the water paid little attention to the interior of the country until a later date. Their interest was aroused as to its interior, by the contest that arose over the upper Ohio valley. The British Board of Trade apparently reissued Logan's report and Kieth's report.

My attention is directed to the map entitled: "North America from the French of Mr. D'Anville Improved with the Back Settlements of Virginia and Course of the Ohio; Illustrated with Geographical and Historical Remarks," being No. 22 C. H. S. Collections, and bearing the notation along the bottom "May, 1755, published by Thomas Jeffery, Geographer to his Royal Highness the Prince of Wales, near Charing Cross."

5217 This map is not entirely identical with the original D'Anville of 1746, in my opinion. As to the physical features, they seem to be much the same. Mr. Beckwith has noted that the date of the D'Anville map of 1746 is incorrect, since the map shows things which could not have been known as early as that date.

(Reading): "The date of this map is not correct, in that it shows forts Dugnene Le Beouf, and Presq Isle (on French Creek and at Erie, Penna.; which were erected several years after the time when this map purports to have been issued. Probably the plate was older than these forts, and in printing a new issue the date of the old plate was not changed. January 8th, 1885. H. W. Beckwith."

That is noted in pencil on the map.

Do not understand that a student of American history is expected to carry in his mind all these detailed facts about all the maps he may have seen in the course of years of study.

5219 Do not recall that I have ever undertook to determine whether this particular detailed map counsel has produced is found in Jeffrey's Atlas or not. The map of North America from the French of D'Anville is like the D'Anville map of 1746 in that it shows no portages.

My attention is directed to Mitchell's map of 1755. 5220 There is a dotted line extending from the northerly end of Lake Michigan, that runs down through Lake Michigan, through the point indicated R. Port Chicagou, and ex-

tends parallel with and near the river indicated as River Chicagou, the main part of it above the forks, thence across to the more northerly or more westerly river, which come together at the point marked the fork, the more southerly which is designated River Theakiki; thence down along that river and along what obviously represents the Illinois river to the Mississippi. On that line is the designation "Illinois river route to the Mississippi 250 miles." The word Mississippi, and the 250 miles being along that part of the line which passes through Lake Michigan. The rest of the designation is down along the Desplaines river. The 5221 word "portage" appears to the west of the upper portion of what I would designate as the Desplaines. Where the Fox-Wisconsin rivers approach each other, is a dotted line, which may perhaps indicate a portage. The word "portage" does not appear there. There is a portage on the Wabash, probably intended to apply to the Wabash, and Miami, or Maumee river. There is another somewhat to the south. Am not certain what it applies to. There is one over toward the eastern end of Lake Erie, on the southern side, evidently between Lake Erie and the upper waters of the branch of the Ohio.

Re-direct Examination.

5222 A dotted line extends along Lake Erie to Sandusky "80 miles by account to the mouth of the Miami river." A dotted line follows the Miami river, to the place where I referred to a portage from that river. This dotted line crosses the portage, continues down the Illinois river along the Kankakee or Theakiki, to the Illinois. There are two portages from the Miami river, one to the Wabash and one to the Iroquois or Theakiki.

5223 On the map on the mouth of the Miami river is a legend "The Miami River 90M. by water."

Cross-Examination Continued.

Q. Would those things to which Mr. Scott has just directed your attention tend to indicate to your mind, Mr. Quaife, that at the time of the publication of this map there was such a route in use as that to which your attention was directed by Mr. Scott?

A. Mr. Scott directed my attention to two things; one was the indication in the lake from the mouth of the Miami river over towards Sandusky which was labeled "80 M. by account;" and to the further indication of the dotted line going down the Miami river and over to the Iroquois and thence down to the mouth of the Kankakee river.

5224 Do not know as I am prepared to explain the significance of any of these dotted lines. I see no explanation of them on the map.

5225 At the point where the word portage appears, apparently referring to a portage which counsel suggests is between the Miami river and the Iroquois river, will say I suppose it is intended to be between the Miami and Wabash rivers. Of the two portages I pointed out, the upper one, I think, is clearly between the Wabash and the source of the Miami. The lower one I should judge is between the Miami, and another branch of the Wabash.

I think these portages might be considered as evidence that the map-maker supposed there was a route that might be used. The geography of the region is a continuing feature, and the use made of the region by people varies from time to time. For illustration, the use of the Chicago portage and Illinois river route. If, as some historians say that route was not used as frequently in the first half of the
5226 eighteenth century as in prior time, that would not appear on the map. It would have to be indicated by a printed statement.

As to whether the fact that a portage was indicated on this map would have some tendency to establish the existence of the portage, would say that the geography of a region is a permanent thing. The map maker does not necessarily indicate what the use may be in any given time in that region by white men. If the word "portage" were put there, would suppose that sometime or other a portage had been made by someone; at least that the map makers thought that such was the case. In arriving at my conclusion of such a matter, would take into consideration whatever I could find that seemed pertinent to the question being weighed.

5227 Maps are valuable as throwing light on historical questions oftentimes. It would depend entirely on the circumstances of the case. Suppose I were investigating the existence and use of a route by way of the Miami and Wabash rivers, as to whether I would regard this map as throwing light on the whole consideration of the subject, I would say

I should think one's decision would have to rest largely on other evidence.

As to whether I would consider the map as pertinent in connection with that investigation, I said that I would consider anything that seemed to bear upon the subject under investigation, and that maps oftentimes are of service in connection with historical investigations. As to whether I would consider in such an investigation as suggested above that this map would be pertinent in the year 1755, I would say that the map was not conclusive evidence on the matter and might not be evidence of any value whatever as to
5228 the use of the portage in the year 1755. It would indicate that the map maker thought there was a condition there which would call for a portage, and probably would indicate that he thought at some time the portage had been used.

My attention is directed to Rocque's map. It is dated 1761, or later, and purports to deal with military events of the French and Indian war from 1754 to 1761, and is a map
5229 of the whole of North America so far as known, I take it. I see no portages. Being asked to indicate the river which I took to represent the Desplaines, I will say in my direct I stated "For the Desplaines is shown an insignificant and unnamed stream lying a considerable distance to the southwest of Chicago."

On the Illinois river, some distance to the southwest of the southern end of Lake Michigan, is a stream I undertook to describe in those terms at transcript 4190. (Abst., 1579.) Immediately above the junction of this stream with the Illinois are the words "The Fork." It is my recollection that I referred to the river flowing into the main stream from the north, just below the word "Fork," as indicating the Desplaines.

5230 My attention is directed to Bowen's map of 1763, entitled "An accurate map of North America describing and distinguishing the British, Spanish and French dominions on this great continent; according to the definitive treaty concluded at Paris, 10th, Feb., 1763," etc., Eman Bowen, geographer to His Majesty, and John Gibson, engraver. It was presumably published after February 10th, 1763. The first edition was probably produced in that year. On this map a portage is indicated between what represents
5231 apparently the Chicago river and the river designated Illinois or Chicagou river, the portage being indicated

by a dotted line, and the word "portage" between them. Would say the portage is represented as being from the upper part of this river Chicagou to the Illinois river opposite. The map also shows the Fox-Wisconsin portage in the same way.

My attention is directed to a map in the work entitled "A topographical Description of such Parts of North America as are contained in the (annexed) Map of the Middle British Colonies, in North America, by T. Pownall, M. P. Governor, etc., of his Majesty's Provinces of Massachusetts Bay and South Carolina, London, Printed for J. Almon," etc.

5232 The title page shows the date of the work to be 1776.

The region around Lake Michigan appears upon what is entitled a sketch of the remaining part of the Ohio river, and so forth, appearing in the upper left hand corner, ruled off from the rest of the map by lines. The map apparently extends as far west. It is represented over the main map, and is on a materially smaller scale than the rest of the map. The scale is about three to ten. I see nothing on the sketch to indicate the Chicago portage, nor the Miami portage.

On the main map there is a portage indicated between a branch of the Miami river to a branch of the Wabash. These streams are shown on the sketch.

My attention is directed to a map entitled: "A map of the Middle British Colonies in North America. First published by Mr. Lewis Evans, of Philadelphia, in 1755; and since corrected and improved, as also extended, with the addition of New England, and bordering parts of Canada; from actual surveys now lying at the Board of Trade. By T. Pownall, M. P. With a topographical description of such parts of North America as are contained in this map. Printed and published according to Act of Parliament for J. Almon in Piccadilly, London. March 25, 1776."

The sources of the map are indicated in the topographical description itself, and is further indicated in the body of the text in addition to the preface.

At page 32 is a paragraph headed "Mississippi River" and purports to be based on the proof of the statement made by Gist in 1761. At page 33 is a reference to what is ordinarily designated as the country of the Illinois.

(Reading): "The triangular tract of land at the head of this great vale, and between the Mississippi, the Ohio, and Lake Erie (as that lake is vulgarly called) the Country of the Illinois is the finest spot of earth

upon the globe swelling with moderate hills, but no mountains, watered by the finest rivers, and of the most delightful climate; the soil, as appears from the woods with which it is clothed, is of the most abundant fruitfulness in vegetation. It abounds with coal, and there are multitudes of sale springs in all parts of it. There
5235 are mines of iron, copper and lead. Wild rye grows here spontaneously."

I see no indication on Hutchin's map of the Chicago portage. It shows the Wisconsin river at the upper corner of the map, but I judge not the full length of the stream. It shows "This river * * * by one portage of about
5236 three miles." A portage is represented between the

Sandusky and the river flowing into the Ohio, which is labelled "Great Miami or Rocky river." That is between an upper tributary of that river and the Sandusky. A portage is pointed out between the branch of the Miami or Rocky river, which flows into the Ohio. The river which seems to represent the Desplaines is called the River Plein. On the maps we have examined up to this time, sometimes the Desplaines is not called anything. Sometimes it was not shown. When it was called anything, it was usually named either the Chicago or Illinois. The date of this map is
5237 November, 1778.

As to whether a map by Hutchins was entitled to as much consideration by historians as one by Lahontan, it would depend entirely on how the two maps were presenting any given view. Speaking generally, I would presume it would be.

Q. I had in mind that classification of maps made by explorers and maps not made by explorers. You put LaHontan, of course, in the class of explorers maps, but not Hutchins. It would perhaps be accurately enough, speaking generally, to say that Hutchins was an explorer, I presume; but treated as source material, other things being equal, Hutchins' opportunities were such as to entitle him to the same consideration, at least as LaHontan, were they not?

A. I should say that would depend entirely on whether LaHontan and Hutchins, or neither, made this particular trip in question up the Desplaines river. I would also point out that I did not put Hutchins' map in anywhere, and I have explained already what I had in mind in saying what I said, or in placing where I placed the LaHontan map.

Re-direct Examination.

5238 This map shows a portage from the St. Joseph river, to a branch of the Miami or Maumee. There is a river running into the west end or southwest end of Lake Erie, called R. Portage. It runs a trifle easterly, and a trifle to the northeast.

Cross-Examination Continued.

Its course being about midway between the Miami, and Sandusky, somewhat closer to the Sandusky toward its mouth. Its source is southwest of the western end of Lake Erie some little distance, in the neighborhood of 50 or 60 miles, I should estimate.

5239 My attention is directed to a map entitled "A particular map of the American Lakes, Rivers, and so forth by Danville." June 25, 1790, No. 23, C. H. S. Collections of maps. A notation underneath the title reads:

"N. B. There is no material alterations in this map from the original, it being a particular map designed to display the Lakes, Rivers, &c., more distant than in the general map.

The proprietor of this work would be wanting in gratitude were he not to acknowledge that the great Reputation and Merit of this work chiefly depended upon the labour of D'Anville & expence of the Duke of Orleans."

It shows a portage between the Wisconsin and Fox rivers, and between the St. Joseph and Wabash. It shows a river designated R. Chicagon, apparently representing the modern Desplaines, which river apparently forks at a point south and a little west of the end of Lake Michigan, and the easterly of the two forks runs up according to the map, very close to Lake Michigan.

5240 Think there is no connection between Lake Michigan, and this waterway, but that rather represents a branch of the River Chicagon. This is a reproduction and enlargement of the other map, so there would be room for error to creep in.

D'Anville's map of 1746 does not show any fork of the river labeled Chicagou. It shows rivers coming from the northwest, and practically direct from the south, and meeting ap-

parently above the shore of Lake Michigan, flowing into
5241 Lake Michigan, and the word Checagou written in. Comparing these two maps and considering the course of these two rivers, I do not know whether the maker of the latter map undertook to correct, or simply blundered in reproducing the D'Anville map. His only statement is he made no material alteration; that the map was designed to display the lakes and rivers more distinctly than in the general map.

I believe an arm of the Desplaines that came up toward the Chicago river, and that in times of high water was a continuous channel between the two rivers, is represented by some of the sources. I think Graham and Philips described it.

5242 Cary's map of 1805 shows the carrying place between the river which flows into the western end of Lake Superior, and the Copper Mine River, continued by the St. Croix, which flows south into the Mississippi; the carrying place between the Fox and Wisconsin; portages between the Plein and the Chicago river, the portage between the St. Joseph and the Maumee; the portage river near the western end of Lake Erie, and the word "portage" below that river.

Do not say what portage it may indicate. The portage
5243 between the Maumee and Wabash river, between the St.

Mary's and Great Miami, and Glaize and the Great Miami, and a portage of four miles between Sandusky creek and Scioto river, which flows south into the Ohio, the description of which reads "Portage of four miles. Through the Sandusky and Scioto lies the most common pass from Canada to the Ohio and the Mississippi."

I see no others that appear on the map. It represents the Desplaines rising to the southwest of the mouth or all of the south branch of the Chicago, flowing some distance southeast, there joining or being joined by a small branch which comes down to the southwest from the portion of the Chicago.

My attention is directed to map No. 33 in a work entitled: "A Complete Historical Chronological, and Geographical American Atlas, being a Guide to the History of North and South America, and the West Indies; Exhibiting An
Accurate Account of the Discovery, Settlement and
5244 Progress of Their Various Kingdoms, States, Provinces, &c., Together with the Wars, Celebrated Battles, and Remarkable Events, to the Year 1822. According to the Plan

of LaSage's Atlas, and Intended as a Companion of La-
Voisine's Improvement of that Celebrated Work. Philadel-
phia: H. S. Carey and I. Lea,—Chestnut Street, 1822."

It shows only the State of Illinois. The word portage ap-
pears in space between Desplaines and Chicago rivers as in-
dicated on map.

Turning to map of United States, at beginning of volume,
under caption "Canal," I read:

"A canal has long been in contemplation to unite the
waters of Lake Michigan, with those of Illinois river.
The Chicago, a river which flows into the south end
of Lake Michigan, is so connected with the Plaines, one
of the head waters of the Illinois, that in freshets boats
pass readily from one to the other. The government
of the United States has given permission to open a
canal, with a grant of 100,000 acres of land, the land
5245 through which it will run, and 90 feet on each side of it.
This canal can probably be made at less expense than
any other water communication between the great lakes
and the Mississippi."

The representation of the Chicago river on this map shows
that the maker had no conception of what it was really like.

Map No. 5 of this volume, indicates no portage between
the Chicago and Desplaines. There is one between the Fox
and Wisconsin.

Whereupon counsel for government offered in evidence cer-
tain plates (For copies of said plates see Appendix, pages
.....) of the government survey, stating that he had
secured them from the Department of the Interior, and asked
whether there would be any question as to their being plats
of the government survey. Counsel for the defendant stated
that counsel for the government might proceed to ask the
witness any question about them and he would have the
maps examined by Mr. Woerman. Whereupon counsel for
the complainant directed the attention of the witness to plats
of fractional township 39, north of the base line of range
No. 14 east of the third principal meridian; of township 39,
north of the base line range 18 east of the third principal
meridian; of township 28 north of the base line range 13 east
of the third principal meridian; of township 38 north of
the base line range 12 east of the third principal meridian,
stating that they were plats obtained from the Department
of Interior, and purporting to be plats of the Government
survey of the townships mentioned made in 1821 or 1822.

The WITNESS. In the plat of fractional section 39 north, range 14 east, section 30, is a representation of a house, with an arrow pointing toward it with the words "portage house." From that point are parallel dotted lines running to the west with the word "Road" out in the margin, just beyond the edge of section 30.

In the plat of township 39 north, range 13 east, what 5248 is I suppose the continuation, we find those dotted lines and the designation "portage road."

On the plat of township 28 north, range 13 east, we find a continuation of the parallel dotted lines, with the designation "portage road" to the northwest corner of the township. Then on plat of township 38 north, range 12 east, we find some more dotted lines, running up to the Desplaines river, designated "portage road," and the dotted lines end near the Desplaines, about on the line near sections one and twelve and midway between the Desplaines and the easterly line of section 12.

In reply to question of counsel for the defendant as to whether there was a certificate on the plats, stated that the plats had not yet been certified but would be, and that the counsel for the defendant would find certified copies of these plats in the recorder's office if he desired to check them up. Counsel for the government further called attention of counsel for the defendant to the notations at the bottom of the plats, which are in substance the same with only the changes in the name explaining what they are, that is, that they are plats of actual surveys.

5249 My attention is directed to a map No. 11, in a volume entitled "New American Atlas, designed principally to Illustrate the Geography of the United States of North America; in which every county in each state and territory of the union is accurately delineated, as far as at present known: The whole compiled from the latest and most authentic information. Philadelphia. Published by Anthony Finley, 1826."

The map embraces Ohio, Indiana, Illinois, and lower part of Wisconsin and Michigan apparently. It indicates by dotted lines and by the word "Portage," what I judge is a portage from a sort of a lake connecting up with the south 5250 branch of the Chicago and Desplaines rivers. It shows above that portage, parallel line running from Chicago down along side the Desplaines, and cutting across the country, not following the exact course of the Illinois, clear down

to St. Louis. Do not know whether it indicates a road or not. Have no reason to dispute it. Probably is intended to represent a road.

I presume the map is of the date of 1826, the date of publication.

5251 On the whole, I would consider it is a fairly accurate map. I am not sure I find any inaccuracies of great importance. The representation as to the Calumet is apparently somewhat different than on the modern maps. The Desplaines does not rise as far north as it should be shown. It shows it as rising up across the Wisconsin line.

Re-direct Examination.

5252 The road referred to by counsel follows the Desplaines and crosses the Illinois just below the forks. Does not touch the Illinois again until it gets to Peoria, and then departs entirely from the Illinois, goes almost due south, turning a little westerly before it reaches Edwardsville. Is not at any point near the Illinois from the time it leaves Peoria. That is, the road runs due south from Fort Clark or Peoria, and the Illinois river flows off to the southwest, then after a time to the south, but this is some distance west of
5253 the road, across a country approximately. It follows down the west side of the Desplaines river.

Cross-Examination Continued.

As to whether the fact that the surveyors who made these surveys of sections of township to which my attention has been directed found a roadway sufficiently definite to be able to survey it and delineate it on their maps, calling it the "portage road," indicated this house that my attention has been called to and called it "portage house" has any bearing in my judgment as a historian on the question of the extent of the use of the Desplaines for travel
5254 and commerce, I think it would indicate that the surveyors found such a road and such a house as they laid down on the plat; and further that they found that those names were appended to the road and the house. It would depend entirely on circumstances whether the fact that they found those things would have any weight with me in determining the extent to which the Desplaines river was used

for the stated purpose. As to whether it would have any bearing on the extent to which the Desplaines was used in my judgment I do not think it would. It would have a bearing on the question of whether they were in the habit of going along this route. The road would not exist otherwise, I should think, unless it was used at some time or other or had been used.

As to whether I would draw any inference from the fact that there was travel along this road which extended from the south branch of the Chicago river to the Desplaines river and which they called the portage road, as to the nature of the travel, that is, as to whether or not the road was used as a portage between two rivers, I would suppose that would indicate that at some time or other there had been some circumstances that had given rise to the name; that circumstances would have had to do with the making of the portage or portages. As to whether I would attach any particular significance to the fact that there was this portage route beginning and ending as indicated on the map and sufficiently well defined for surveyors to be able to locate it and delineate it on their plats, I would say I would generally attach such significance as I have indicated; and further such significance as whatever additional information I might have would seem to me to make proper in the case. The name might show that the portage had been used a long time before; it might show various other things, that is to say, we need further information in order to draw any conclusion in this matter.

I would call counsel's attention to the fact that I happened to have noticed within the last year over in southern Michigan that there is a road that they still call the Chicago road. It does not indicate, as I understand it, that people are in the habit of traveling that road to Chicago or that they have for a generation or two; but that originally that was a part of the old trail between Detroit and Chicago.

As to whether in the treaty of 1816 with the Ottawas, the west end of the portage road was the point from which the boundary line of this tract that was ceded by the Indians was determined, I would say I am not sure that I follow that Mr. Corneau.

The government boundary was the line ten miles north of the west end of the portage between Chicago Creek and Desplaines Creek, something of that sort; here it is: "To a point

ten miles north of the west end of the portage between Chicago Creek which empties into Lake Michigan, and the river Desplaines, a fork of the Illinois."

As to whether or not that would tend to indicate to my mind that the portage road was pretty well defined and pretty well known at that time, or that the course and location of the portage was pretty well known at the time, would say

I suppose the Commissioners had in mind some point 5257 which they thought they described in this fashion.

I believe that Graham and Phillips undertook to run the boundary lines of that cession, and I suppose they did run the boundary line. I do not happen to know that that is the line known locally here among real estate men and so on as the Indian boundary line. If counsel states it I will see no reason to question it. Taking into account any sort of use of the Desplaines, whether by boats floated in water all the way; whether by long portages or short portages; whether difficulties were encountered and portages had to be made on the way or not; as to whether it is my opinion that, during the period from the latter part of the seventeenth century through the first third of the nineteenth century, and particularly during the period from 1783 and 1825 and thereabouts, men engaged in the fur trade did pass up and down the Desplaines river in canoes and flat bottomed

boats very regularly, I would say the question would call 5258 for some discussion in the way of an answer, I am not sure whether counsel and I would understand the same thing by use of the Desplaines river, if the boats were being hauled by traders in carts or if the passage were in some other fashion which had not to do with the use of the Desplaines river, I would not hardly call that use of the Desplaines.

COUNSEL FOR GOVERNMENT. No, I would not have you consider that they were using the Desplaines when they were hauling their boats on carts; but I want you to take into consideration any use made of the Desplaines, whether they made a long portage between the Chicago and Desplaines river or a short one or none at all; and whether after they put their boats in the water in the Desplaines they had to take them out again and make portages around rapids and shallows or any other difficulties or any other similar circumstances.

The WITNESS. I suppose one of those similar difficulties would include making the portage which excluded using the Desplaines altogether, would it not?

COUNSEL FOR GOVERNMENT. I was speaking of the difficulties arising after they had put their boats in the water of the Desplaines, I am not asking you to assume that if any 5259 people made a portage all the way from the Chicago to the Illinois river that they were using the Desplaines.

A. As to the last words "very regularly. I do not understand the Desplaines was used,—" I take "very regularly" to mean with great regularity, or something to that effect. I do not understand the Desplaines was used in such fashion by traders in that period.

As to whether I would say the Desplaines was commonly used in that fashion, I would say I would think as I have pointed out at various times heretofore that when there was a trader or other individual who had occasion to pass up the general route of the Illinois River Valley toward Lake Michigan, or to pass in the other direction down, if he found it practicable to use the Desplaines, and if his wishes and convenience would admit of such use, that doubtless he made such use as he found he could make of it. Various sources and authorities have been cited and used in my own testimony and in the testimony of others in this case, which go to indicate what the character of that use was. I do not understand that there was any great degree of regularity in the use of the Desplaines by boats in the water barring or perhaps explaining that if counsel would regard a passage once a 5260 year or twice a year as constituting regular use, in that sense perhaps something could be said as to the regularity of such use."

As to whether I would say that it was a common occurrence during the period from 1783 to 1825 or thereabouts for traders or travelers to use the Desplaines to some extent with boats, I would say it seems clear from the facts that the Desplaines was used to some extent a good many times during that forty odd year period. As to whether I would say that the Desplaines was not commonly used during that period, I would say it would depend upon what counsel means by commonly.

Q. I mean just what the word means.

A. I suppose you understand that there are degrees as to what is meant when one uses the word in that way?

Q. Well, you used it yourself the other day; in speaking of somebody or other you said that you did not think that the Desplaines was commonly used all the way from Lake Michigan down or something of that sort. You may construe the word in this case as you used it in that case.

A. From 1818 to 1824 according to Mr. Hubbard the Desplaines was used by the American Fur Company, I believe twice a year or practically that. That constitutes regularity in a certain sense, of course. That is to say, they used 5261 it in the fall in the way his accounts of the down trips in the fall indicate; and I believe they do show that they had their boats in the water some of the time in those down trips; and they used it in the spring in the way that some of his accounts indicate. I know of no other similar regular use of the Desplaines or of any account of such use for the remainder of the period.

There are the various scattering accounts of direct or indirect use, or bearing, I mean to say, on the question of the use of the Desplaines which have been cited in the record.

According to the record I stated in my final conclusion on record 4259 (Abst., 1605), that it is clear that there is a high-way of travel between Lake Michigan and the Mississippi by way of the Chicago-Illinois river route. At the same time I stated that doubtless it was followed between the Chicago and the Illinois when it was practicable. I would now qualify that statement further by saying it might have been practicable to use the Desplaines at times when it did not suit the convenience or desire of the traveler so to do, and at record page 4415 (Abst., 1661) I appear to have spoken of the usual or frequently followed Illinois river route.

5262 Whereupon counsel stated that at page 4391 (Abst., 1655) the witness had said "I would suppose as a matter of interference and observation that that may have been the case" that the Desplaines had been used in cases of which we had no specific accounts, and quoted the record of his testimony at p. 4396 (Abst., 1657).

5263 The WITNESS. As to whether I presume that the Desplaines was used in cases of which we have no specific accounts, I would suggest that I have squarely answered that question in the place to which counsel had just called my attention at page 4396 of the record. Having in mind these facts as to whether or not in my opinion the Desplaines river was to some extent at least commonly used by traders and others during the period between 1783 and 1825, and ignoring the character of the use, would reply that it was used certainly to some extent in that period by traders and others. As to "commonly" I would understand that this is a relative term and it would depend entirely upon the way in which it is used and the way in which it is

understood whether the term is justified or not. To put my own interpretation upon the words "commonly used" would say that, "It is my opinion that there was use of the Desplaines river or attempted use of the Desplaines river. Counsel has directed me to waive that particular matter, as to the nature and extent of that use, between 1783 and 1825. Apparently the use of the Desplaines was more extensive in years beginning 1817 or 1818 and up to 1824 than any other portion of the period. For the rest, we have only such information as the account of Heward of the use he was supposed to have made of the Desplaines, and we have to depend largely for a conclusion on this question of our knowledge of the physical conditions, our knowledge of the probable, conceivable or possible demand for such a route or highway as the Desplaines offered in this period, and upon our knowledge of the way at different times in and before this period that traders, and travelers were in the habit of passing from Lake Michigan to the Illinois river proper or vice versa. Do not think it has been established that the Desplaines was commonly used in this period. In this period in the sense that I may express in another way by saying frequently used. I speak of use by boats in the water. It was used in the way the traders who Schoolcraft speaks of intended to attempt to use it, more frequently than it was used in its entirety.

5266 CLARENCE W. ALVORD, heretofore called as a witness on behalf of the complainant, resumed the stand and was further cross-examined as follows:

In my conclusion as given on pages 361 and 362 of the record (Abst., 170) I said:

"As a historian I would answer the question as follows:

5267 "Giving due weight to all the sources of information that are available, my opinion is that from the latter part of the Twelfth Century through the first third of the Nineteenth Century men engaged in the fur trade passed up and down the Chicago and Desplaines rivers in canoes and flat boats very regularly."

I do not wish that to stand as "flat boats." My intention was to say "flat bottom boats."

MILO MILTON QUAIFE, a witness on behalf of the defendant, thereupon resumed the stand:

Re-direct Examination by Mr. Scott.

5268 I take up the matter of Joutel's journal as published in volume 3 of Margry referred to in my cross-examination, page 4700 (Abst., 1739), where I reserved the book for further consideration. Upon further study I find that the manuscript in this journal as published in Margry existed in a mutilated condition, some parts lacking all together. Margry supplied these portions as best he might. I give what I understand to be a reasonable fair and accurate translation of pages 648 and 649, volume 3 Margry. The editor says:

"The sixth number of this division, a document without the author's name is the relation of Henry Joutel who according to a letter of this Lieutenant of La Salle was employed by Lemoyne D'Iberville to rediscover the mouth of the Mississippi river, although, however, said he, it was found as I think without great trouble.

5269 We had much of trouble and peril in it and others will have the profit. It appears or it seems that all has been done that could be done to eradicate the idea that M. de La Salle was the originator of this enterprise. This allegation of Joutel's leads one to desire to know how his manuscript has been preserved to us.

In the first place one of the chapters of Delisle which I have reproduced to fill up the omission of the original bears these words noted on it:

"This journal was written by Sier Joutel and was communicated to my father by M. D'Iberville who transmitted it to him in 1701 at Rochefort or from Rochefort as the cause may be."

I would suggest as a translation for the word "cahier" a bundle of manuscript or some such significance as that.

"A letter addressed to La Salle in 1703 by Claud Delisle according to a notation placed at its head, affirms what is about to be read or what we are about to read upon it.

Claud Delisle (with a question mark as to Claud, evidently he is uncertain which of the Delisles it was) explains that this manuscript came into his possession two years before and that he read it with much pleasure and profit but that the leaves which were missing played

5270 havoc with all the measures of a geographer who does not know how to profit by the distances, or who is unable to profit by the distance or the compass when one is lacking. These omissions worried Delisle a good deal. I have been a long time troubled he writes (or you may translate 'empine' perhaps as worried) to become acquainted with the author of this journal in order to have recourse to him and beg him to instruct me concerning that which is lacking in his work. I do not know how I became aware that it was M. Jouventel, but having inquired concerning him from many persons I was unable to discover either where he was or even if he was still alive. But now comes Monsieur de Abbe de Beaumont who explains the mystery in apprising me (or informing me) that it is you, Monsieur, who are the man whom I have so long desired to know; and that your name is Joutel and not Jouventel. If I had been able to disinter you before my map was engraved I would have sent it to you to beg you to give me your advice concerning it, but since to my misfortune that did not so turn out, or that did not happen, all the favor which I ask of you and this I ask with hands clasped (or ask earnestly) is that you will have someone write down for me on your original the portions which are lacking in the copy which has been communicated to me, so that I may be able to put things together and assure myself by you
5271 yourself of the entire journey (or route) which you made.

I hope that to the consideration of Abbe de Beaumont or with the consideration of Abbe de Beaumont you will not refuse me this favor."

Here ends the letter of Delisle, and Joutel replied, and I read:

"I learn from your letter that you have become aware or have seen those memoirs which were put in the hands of M. de Pontchartrain, who asked them of me on the first voyage which M. D'Iberville made into that country, and it was promised that they would be returned to me but which none the less (or nevertheless) I have never had any news since. I do not know what caused this omission (or this hiatus) which you note has been torn out, and the reason which may have caused it or literally which one has had.

I transmit to you that which you point out you lack

as well as I have been able. I would desire to be able to give you more light, but as I had no instrument to enable me to take the elevations; and moreover our greatest need was to be able to proceed, and our route (or our journey) was traversed by numerous hindrances as you see in my memoirs in the forest and rivers, ravines and other like things where it was necessary for us to seek for fords and passages, hindred us from being
5272 able to direct our route properly or well; and furthermore I did not have or I do not have the knowledge to enable me to draw the plan of the places where we passed so that I indicate them to you haphazard (or by chance).

If I had been happy enough to have the honor of your acquaintance before I was written to by M. de Pontchartrain we would perhaps have been able to make something out of these memoirs, but as there have been several who have written of them although they speak falsely in many of the descriptions or narratives, the public is unable to judge the true from the false, not having been there."

It appears from an examination of the relation that this portion of the relation represented by the editor to have been taken from the manuscript which Delisle has left, and that this portion of the manuscript leaves off, and the original text of Joutel begins on page 484, that the chapter concludes with this paragraph, and the next chapter which deals further with the plan of the Joutel party in this period by Joutel himself; that is to say, is from the original manuscript, and is the
5273 chapter from which the complainant's witness took the paragraph that he put into the record.

As to that part of the manuscript which I took up and gave with reasonable accuracy the substance of the narrative, I have no reason to materially change any of the translations I gave. Joutel in telling of when he was at Chicago about starting to run up the lake, used the French word
5274 "aschafaud." The English translation of this part of Joutel's journal, translates that word as scaffold, that is they placed the canoe on a scaffold.

I will read from page 497 of the document (reading):

"The said canoes were laden with merchandise, with powder, ball and other munitions appropriate to the trade which is conducted in that place; but they were not able to come because there was not any water, or

there was no water at that time in the river; or, rather, that it was frozen."

That refers to the men from Montreal, who abandoned their canoes at Chicago, and went over to Fort Lewis to inform Tonty they had brought goods to Chicago, and could
5275 bring them no further. This refers to the men who came to Chicago in December.

Referring to Hull's map entitled "Copy of Map of the Country from Lake Michigan to the Illinois River, from the papers of Gen. Wm. Hull, Govr. of Michigan, from 1805 to 1812," complainant's witness, transcript, 369, (Abst., 172) said:

5276 "The map is evidently drawn by General Hull, according to the statement of Mr. Hager, and was found among his manuscripts by his grandson. Historians would regard it as an authentic map coming from the hands of General Hull, unless some evidence to the contrary was shown."

Do not understand that this is a valid conclusion. My own opinion is that historians would presume that the evidence was sufficient to establish the proposition, in the light of any contrary evidence that the map came from the papers of General Hull. I see no warrant whatever for assuming that it was drawn by Hull or that historians would regard it as coming from his hand. If there is evidence to show this such evidence has not been put into the record. As I have pointed
out, Hull was a man of sluggish temperament in this
5277 period of his life; so do not think it is a fair conclusion that while he was governor of the territory of Michigan that he himself had been to Chicago over the portage and had drawn this map.

Turning now to the map itself, I would point out first with reference to the table of distances that reckoning from the point where the portage strikes the Desplaines—

Mr. CORNEAU. By the way, before you go any further; I move to strike out that part of the answer preceding the words "Turning now to the map itself," and so on, as not being responsive to the question and as not being a subject matter for re-direct examination.

Mr. SCOTT. Proceed.

A. Beginning then with the point where the portage strikes the Desplaines, the table of distances down to the mouth of the Desplaines or to the Kankakee totals up as I make it 59 miles. To make sure that I am not committing

an error here I will simply read the distances: "From the river De Cross river 6 miles; to Monjoliette 38 miles; to River DuPage 11 miles; to the fork on the Kankakee, 4 miles."

5278 The distance in fact is approximately 45 miles. The representation of Lake Michigan is inaccurate in this respect. It represents the trend of the lake as sharply from northeast to southwest, that the westernmost point is near the southern end of the western side, approximately at the mouth of Chicago, Lake Michigan stands more nearly in fact north and south, leaving out the extreme northern end which obviously turns toward the east somewhat.

The river labeled Riv. du Chemin on the Hull map is represented as going into Lake Michigan on the eastern side, some distance above southern end of lake, approximately in the region of the mouth of the modern St. Joseph. The river du Chemin was, I understand it, a stream sometimes called Trail Creek, which empties into the lake at Michigan City, Indiana, further to the south or southwest; and with reference to the lake at the southern end, rather than around 5279 to the eastern side.

The Grand Killamick on this map lies directly south of the whole southern end of the lake, flows into Lake Michigan toward the eastern side of the southern end, rather than toward the western side. From the point where the portage strikes the river Desplaines, that river is represented as flowing approximately due west, barring sinuosities, to its junction with the Kankakee, the mouth of the Desplaines being almost exactly in a due west direction of the point where the portage strikes the Desplaines. The Kankakee is represented as rising southwest of Lake Michigan. None of its sources are shown as far to the east with the possible exception of one, as the westernmost point of Lake Michigan. Perhaps the drawer did not care to indicate the further course of the Kankakee. The Desplaines is represented as 5280 rising further south than the north branch of the Chicago river. Peoria lake is shown due west of the upper portion of the Kankakee river proper, and is considerably further south than any point on the Kankakee.

With reference to Hennepin's map referred to by me at transcript, 4274 (Abst., 1613), when I prepared the statement with reference to these maps, I assumed that Hennepin's map bore out the verbal account in his narrative as to the navigability or non-navigability of these streams. Made no

particular study in that connection. I now wish to qualify my testimony in this particular. Hennepin's map in 5281 Thwaite's, reprint of Hennepin, facing page 21, Volume one, shows a river flowing from the south toward the north into the southern end of Lake Michigan. The Fort of the Miamis is located at the mouth of the river. Further to the west the Illinois river is represented, and proceeding up the Illinois, it divides into three main tributaries, the three are roughly parallel with each other, proceeding from north to south. Between the middle of these three, and the river which flows into the south end of lake Michigan, is the word "portage," which I interpret to mean, admitting and observing that there are many inaccuracies in the map, a portage between the Kankakee and the St. Joseph.

The northernmost of the three tributaries of the Illinois rises somewhat south of Green Bay, flows south, then southwest to its junction with the Illinois, its course coming close to the western projection of Lake Michigan which projection, while not accurate, may be supposed to stand for the modern Chicago river. It appears rather as a bay or an arm than as a river, but has the south branch and the 5282 north branch clearly indicated. There is no indication of a portage between the arm of Lake Michigan and the river which flows down from this point to the southwest to join the Illinois.

Re-cross Examination.

Mr. CORNEAU. What river do you take to be referred to by the most southerly of these three rivers you have mentioned, being the river which comes together with the river to which the word "portage" apparently refers?

The WITNESS. I could not give any modern equivalent for that river. It appears to rise down near the Ohio and flow in a generally northwesterly direction to its junction with the other stream which counsel has indicated. As I have said, the map is erroneous in many respects.

Re-direct Examination (Continued).

Heretofore I have referred to General Gage's report. At transcript, 4420 (Abst., 1662), the portion, which refers to the fact that the French went up the Mississippi but a cer-

tain distance. I now refer to chapter 3 of Winsor's
5283 Western Movement entitled Louisiana, Florida and the
Illinois country, 1763 to 1768, page 24, dealing especially with the question of trade in the northwest in that period. On page 23 has been discussed the pre-eminence which St. Louis acquires as a result of issues arising out of the peace of 1763, and then speaks of French settlements in vicinity of lower Illinois, especially on western side of the river, and the trade in this region, reading page 24:

"The trade of that part of this distant country lying west of the Lake of the Woods had been drawn in large part of the English factors at Hudson's Bay. From Lake Superior the traders were already pushing to Rainy Lake, and by 1770 they had established posts on Lake Winnepeg and beyond, as well as farther south on the upper branches of the Mississippi.

Trading west of Detroit had been prohibited except by license, and under such a privilege Alexander Henry had enjoyed the freedom of Lake Superior. But police control in such conditions was impossible, and it was not unlikely that the trader without a license turned his tracks down the Great Valley, rather than
5284 risk detection on the St. Lawrence. The English commander at Fort Chartres was always complaining that the traders on the opposite sides of the Mississippi acted in collusion. There were ninety carrying places between the Lake of the Woods and Montreal. It was not strange that the trading canoes were oftener seen gliding on the almost uninterrupted current of the Mississippi, where they were easily thrown into companionship with the French packmen, as far north as the Falls of St. Anthony and higher up. Such intercourse boded no good to the English."

If Gage was unable to learn that French traders had ever been north of the mouth of the Illinois by 1762, evidently very promptly after that they found their way much further north. Speaking, from memory, I would say, he further indicates in this volume that soon the French were pushing
5285 over towards the Great Lakes, competing with the English within twenty leagues of Detroit.

With reference to the Hubbard manuscript, which I referred to at transcript, 4883 (Abst., 1801), I wrote a letter to Henry Hamilton, who compiled the life of Hubbard used in

this case and asked him to state whether certain manuscripts were written by Hubbard. I read his answer (reading):

"Richmond, Illinois, June 15, 1911.

I have yours of the 13th and in reply beg to state that the 'Old account book,' you refer to, was the property of Mr. Hubbard, and writing in pencil is all his writing. This autobiography is what I compiled his memoirs from.

The sheets of manuscript you refer to were copied from the old book, to be used for an address at an Old
5286 Settlers' meeting in Iroquois County, but whether I copied them, or whether Mr. Hubbard made the copy, himself, I am unable to say, without a personal examination.

It should, however, be easy to determine with the handwriting is that of Mr. Hubbard or not. Those sheets possess no particular value and were turned over to the Society simply because they happened to be in the book.

I do not expect to be in Chicago before July, but if I can give you any addition information shall be glad to do so.

Yours truly,

H. E. HAMILTON."

The account book referred to is the large one which the society possesses. It contains Hubbard's manuscript as indicated here, also clippings, and other things. The statements with reference to the loose sheets has no application to the manuscript offered in evidence, dealing with Hubbard's
5287 First Year in the West. I extracted the pertinent portions of the manuscript from the collection and sent them under registered letter to Hamilton, and asked him to state who had written them. His reply follows:

"Richmond, Ills.

June 20, 1911.

Mr. M. M. Quaife,

Chicago:

Dear Sir:

Referring to the manuscript of which you send me pages 27-29 and which I herewith return.

The manuscript is in the handwriting of Gordon S. Hubbard and details some incidents of his early life. It was undoubtedly written by him as an address to be read at some Old Settlers' Meeting, and was so read.

The corrections and notations would indicate that this manuscript had been in the hands of a Printer, and so I presume that it was published in some newspaper at the time it was read.

It was not used in the preparation of his memoirs. That book was compiled from the old account book, and from letters written to me by Mr. Hubbard, during a winter's sojourn in California, together with my recollection of conversations had with him during the long years of our intimacy. This manuscript has no particular historical value other than the fact that it is in the handwriting of Mr. Hubbard, as it is a repetition of what he had already written in the old book.

During the later years of Mr. Hubbard's life he was frequently called upon to read a paper, or give an address upon early times, and he probably used the facts stated in his 'Life,' very many times. These papers were sometimes written by himself, and at other times were prepared by myself or some member of his family.

Among papers thus read, I remember one which was read at a meeting of the 'Sons of Vermont.' Another, for the benefit of a church, another at a Pioneers' Meeting at Racine, and still another, at an old settlers' meeting at Bunkum in Iroquois Co. I think the manuscript in question was prepared for the Bunkum meeting.

"I knew of nothing further than I can say which will add to the identification of this manuscript. There is no question but what the facts are as I have stated them.

Yours truly,

H. E. HAMILTON."

The particular sheets I sent to Hamilton to identify are the only ones which I have quoted in my testimony with reference to the Hubbard manuscript of "First Year of his Life in the West."

I turn to the letter produced in my cross-examination of July 1st, an original letter of Gurdon S. Hubbard.

Q. Is there anything in that letter which shows jurisdiction of Deschamps in the American Fur Company trade?

Objection; incompetent, irrelevant and immaterial, not proper re-direct.

Answer: Yes, sir. It is the letter of Hubbard to George H. Woodruff dated June 7, 1881 (reading):

5290 "You ask me for my recollections of Mount Joliett &c. I first saw that place in October, 1818. I was then a boy 16 years old under the command on Antoine Deschamps an old gray-haired educated man, in charge of the American Fur Co.'s trading posts on the Illinois River. His command was known as the Illinois Brigade, comprised of 12 Mackanaw bots with which we coasted the eastern shore of Lake Michigan"—here occurs that interlienation, from Mackanaw—"loaded with merchandise for the Indian trade on the Illinois River. * * *

The goods transported across the 'portage' on our men's backs, reloaded at the Desplaines which we descended to our destined trading post locations. The first on the Illinois River about one mile above the present city Hennepin, next Westby City & on down 40 to 60 miles apart to its mouth rather 20 to 30 miles above. This embraced Mr. Deschamps' jurisdiction extending east to Wabash and west Mississippi Rivers."

5291 As to my further qualifications of the reliability of details in Hubbard, I read from this letter written to me by Mr. Hamilton, dated June 20, 1911 (reading):

"The manuscript is in the handwriting of Gurdon S. Hubbard and details some incidents of his early life. It was undoubtedly written by him as an address to be used at some Old Settlers Meetings, and was so read. The corrections and notations would indicate that this manuscript had ben in the hands of a printer, and so I presume that it was published in some newspaper at the time it was read. It was not used in the preparation of his memoirs. That book was compiled from the old account book, and from letters written to me by Mr. Hubbard, during a winters sojourn in California, together with my recollection of conversations had with him during the long years of our intimacy."

5292 This agrees in spirit with what Hamilton says in the introduction to the public life of Hubard, and elaborates it as to the statement which was compiled from Hamilton's recollection of conversations he had with Hubbard.

I call attention to Hubbard's letter to Woodruff; I had as part of my study of Hubbard's life come to the conclusion that the story with reference to Isle LaCache was invalid, and baseless as to the details in the way in which it received its name.

I find in this letter Hubbard himself states that he regards those stories as fabulous and not authentic history. I read the pertinent portion of the letter:

"I don't credit the whole story, though I don't doubt goods were hidden. Old Papaneau, who was not as superstitious as some in those early days of men, said to me he had heard a good many different versions of the story. Like many others in those days are not to be credited or given authoritative history of the past. I came to the conclusion that some property had been saved by hiding on the island of the river, or the grove west, probably the latter. Because the river island is too low for safe burial of articles. That the name was given 'Cashe' (Hiding) from a deposit for safety of something valuable under some unusual circumstance I have no doubt, but do not give any credit to the old tradition. I think it best not to mention such things to be looked upon as history."

The history of Isle la Cache as published in the life is set forth with considerable and precise detail. Conversations are given in much the same fashion that Jacob Weems reports the events of the early life of the precocious George Washington, and evidently Hubbard would put no stock whatever in the details of that published story. I think it fair to assume that other details in the book are open to question, and should be accepted only after careful examination and verification.

In speaking of Drown's history of Peoria, I have stated that I considered that particular part of Drown in regard to the keel boats and Durham boats as being a fish story. I had in mind at that time that a fish story was a self-evident yard. From memory, the century dictionary defines it as a tale or narrative that is exaggerated or improbable. As further reason for believing the story invalid, I call attention to Drown's statement as to the population of Peoria in this period. At page 81 is an account of the coming of the first white American settlers to Peoria in 1819:

"In the spring of 1819 a few hardy sons of Kentucky, Virginia and New York living as I have before said, on Shoal Creek, resolved on an enterprise and settlement further north if found favorable wishes in this delightful part of our state. Accordingly seven persons united themselves into a band for this undertaking, and fitting out a keel boat destined for the Illinois river and Fort

Clark at the foot of Peoria lake, as this place was then called. Those persons were"—and then he proceeds to name them all. Shall not undertake to read all those names; and then there is a further account of their coming and their arrival here early in 1819. Then omitting a couple of pages, I begin to read again on page 83 to show further as to the growth of population in Peoria in this period (reading):

"As I have said before, Eads and his companions commenced the first improvements after the destruction of this French town. They were soon followed by a few hardy sons of the Empire and Eastern States. In the spring of 1826, Capt. Henry B. Stillman came here from the Sangamon country where he emigrated to in 1818, from Canandaigua, N. Y. (his native place, and where I knew him when a child, more than forty years since). He was accompanied by two brothers from Canandaigua. Capt. Stillman is still among us, a wealthy citizen and proprietor in city lots. Another of our old pioneers and citizens, who is still with us, Mr. John Hamlin, of Mass. He came here in the spring of 1821 from Springfield, in company with Judge Lockwood, Judge Latham (who afterwards became a citizen and proprietor of city lots, and died here in 1826, and whom I shall have occasion hereafter to notice). Maj. Iles, Gen. J. Adams and a
5297 Mr. Winchester, Maj. Graham, Indian agent, of St. Louis, came here about that time with a keel-boat and proceeded up to La Salle prairie (Rome) where he paid off the Indians their annuity. Some of them returned and settled here subsequently, and became useful citizens in building up our city."

The passage on page 84, which was first cited in the record from Drown as to John Hamlin's employment with the American Fur Company and as to trade being carried on in keel boats and Durham boats up the Illinois and Desplaines to Chicago, concludes all that appears in Drown's as to the population of Peoria in 1825.

Two individuals have been named in addition to the seven who come in 1819. Evidently there was not a very large population in this place in 1825, nor was there at Chicago at that time, not being more than three or four families outside of the garrison. Yet it is represented in Drown's Peoria, page 84, that Hamlin exported produce to Chicago in 1825 in keel

boats as far as the mouth of the Kankakee, and there built a storehouse to restore goods from the keel boats, and from that point he took them up the Aux Plain river to Chicago by Durham boats. If the passage means anything at all, it 5298 means that considerable commercial operation was engaged in at this time in this way.

Mr. CORNEAU. Let me ask you right there; you referred to that passage that was read in your cross-examination, did you not? I just want to make that clear on the record.

The WITNESS. The passage was originally read in by the witness for the United States. These other passages were called to my attention by counsel for the United States on cross-examination.

Further as to the population of Peoria it appears that as late as 1830, Peoria had but 22 buildings including the court house, store, blacksmith shop and all. It is improbable and unreasonable to suppose that any such commerce was being carried on between Peoria and Chicago by way of Illinois in keel boats, and Desplaines river in Durham boats.

In this connection I have in mind what I know of physical conditions of Desplaines and historical sources, dealing with the use white men made of it, and the way in which the travel and trade was carried on between Joliet and down the

Illinois, and Chicago in the early period of white occupation around 1830 and later. Have looked up the different kinds of boats used on Western waters in this period. Keel boats were used for both up and down stream navigation. Was a heavy and unwieldy affair and the process of work upstream, extremely laborious. It would sometimes take three months to bring a keel boat—am not sure this was not the usual occurrence—from New Orleans to the mouth of the Ohio or the St. Louis. Toil was extremely severe. 5300 They oftentimes took advantage of eddies, but the usual method of propelling them upstream was either by taking hold of bushes and pulling the boat along or running along side of the bank. Of course, labor involved depended on size of boat and load.

In this connection I refer to Evans Pedestrian Tour, 5301 in Hoffman's Winter in the West, volume One, page 244, is a passage bearing on the interest of St. Louis in having a canal from Lake Michigan to the Illinois.

"There is one improvement to be made however, in this section of the country which will greatly influence the permanent value of property of Chicago."

(Reading):

"St. Louis would then be brought comparatively near to New York, while two-thirds of the Mississippi Valley would be supplied by this route immediately from the markets of the latter. This canal is the only remaining link wanting to complete the most stupendous chain of inland communication in the world."

That helps to supply a motive on the part of the people of St. Louis for desiring such a canal, such a motive as Professor McLaughlin on his examination was unable to suggest or perceive.

5302 *Re-cross Examination by Mr. Corneau.*

The book shown me is the account book which I undertook to describe to Mr. Hamilton, which he, without hesitation, said contained the account in Hubbard's own handwriting, which was used in preparing memoirs. At this point (indicating) is a description of the first trip down the Desplaines.

This part which I am now asked by counsel to read is in lead pencil and is in the writing of Mr. Hubbard according to Mr. Hamilton's letter. To explain the connection before I begin to read it, I would say, having looked back over preceding pages, Hubbard has been giving an account of the passage through Mud Lake, and he goes on with the passage, and at the point which counsel refers to, he takes up the account of their further progress down the Desplaines river (reading):

"Taking up our voyage with boats loaded, we proceeded down the Desplaines to Isle LaCache, where from low water we were compelled to unload the greater part of our goods in order to pass our boats over the shoal that here presented itself, and we camped." * * *

5304 "Our progress from this point was very slow, most of the way to the Illinois river our goods were carried on our backs, our boats pulled almost light over the shallow places, often having to put poles under the bottom at the very shallow rocky places, some three weeks was occupied in getting to mouth of Fox river, two days more brought us to the foot of Starved Rock."

From there we had the consolation of knowing our further progress would not be retarded for want of sufficient depth of water."

As to the authorship of the Hull map, have looked into Andreas' and read remarks of complainant's witness, also various publications on Hull with the idea of learning something of his life, but not with particular reference to this map, though I would have taken note of anything in that connection.

5305 I have stated I thought it would be a fair conclusion from what complainant's witness stated at transcript 370 (Abst., 173) that he meant to state that Hull had been

5306 in Chicago. It will be a perfectly fair deduction from this passage, I will say, that the witness meant to say that Hull had been in Chicago or in this vicinity. Hardly see how he could have drawn the map without having seen the vicinity unless it is a mere copy of someone else's map, which idea was evidently not intended to be conveyed at this point in the record. He says the map is evidently drawn by General Hull, and further that historians would regard it as an authentic copy coming from the hands of Hull, unless evidence to the contrary was shown.

5307 J. W. WOERMANN, witness for the defendant, testified further:

Cross-Examination by Mr. Cressy.

It was stipulated and agreed between the counsel that either side might call on the other for any maps which had been referred to during the examination of historical witnesses, and the maps when called for and furnished might be considered as formally offered in evidence, and that either party might use the maps referred to.

Counsel for defendant then introduced in evidence a report of the sub-committee on Dams and Water Power, to the Committee of Interstate and Foreign Commerce, House of Representatives, second session, Sixtieth Congress, February 25, 1909, Washington, Government Printing Office, a
5308 hearing before Honorable William H. Taft, Secretary of War, in connection with the development of the Illinois State Valley Power, pages 36, 37 and 38:

5309 "Hearing before Hon. William H. Taft, Secretary of War, in connection with the development of the Illinois Valley Water Power.

War Department, District of Columbia.

February 23, 1907, 10:30 A. M.

"Present, Brig. Gen. Alexander Mackenzie, Chief of Engineers, United States Army; Mr. I. Randolph, representing the State of Illinois; Hon. H. M. Snapp, Mr. J. W. Woermann, and Mr. Charles A. Monroe, representing the Economy Light and Power Company.

SECRETARY TAFT. Gentlemen, as I understand this application, it is to prevent me from granting a permit to any person on the Desplaines river to build a dam for water power purposes, on the ground that the state is interested in supervising that matter itself. Is that about the size of it?

Statement of Mr. I. Randolph on Behalf of the State of Illinois.

5310 The position of the state, as I understand it, is this: I am appearing in this matter at the present time for the state, because, as I understand, the Sanitary District has no interest in the present application whatever. The work of The Sanitary District, however, has made possible the development of very, very important water power on the Desplaines and Illinois rivers. Prior to the completion of that work the water powers on the Desplaines river were inconsequential. They amounted to but little. The water power on the Illinois river was somewhat better. There was no development at Marceilles. But the opening of the Sanitary District naturally has turned into those rivers a permanent volume of water, which makes the development of the water powers possible on quite a valuable scale.

The interest of the state in this is to see that this asset is developed to the fullest extent and that it shall be so developed as not to interfere with the creation of a waterway such as the state hopes to see put through.

Mr. SNAPP. If the general government has no right either in this property or to the water power developed thereby, there can properly be no determination of this matter by any of the officers of the government. Now, as a matter of fact, all the property interest in the Desplaines Valley, belongs to private parties. There is

absolutely no public ownership of any land in the Desplaines Valley. The stream is not a navigable stream. In low water the entire flow of the Desplaines river would come probably through a 6-inch pipe. It falls downhill, falling 100 feet in less than 30 miles. Neither the flow of the water nor the contour of the land makes
5311 the stream navigable, and it has been so held.

Secretary TAFT. You say the Desplaines is not a navigable stream?

Mr. SNAPP. It is not a navigable stream either in law or in fact. It could not be navigated in low water, in the natural condition of the river, by a birch-bark canoe.

Secretary TAFT. How do we get any jurisdiction of it, General Mackenzie?

Mr. SNAPP. Let me answer, Mr. Secretary, as a lawyer. You undoubtedly have none, and I was going to bring to the attention of the Secretary—

Secretary TAFT. Why do you come here for a permit, then?

Mr. Snapp then explains that they did not come for a permit but for advice to be more safe to proceed.

Mr. Randolph then states that the river is meandered by the surveys, and thinks that might make it navigable. Secretary Taft answers that has nothing to do with determining whether the river is navigable. A long conversation follows, after which Secretary Taft rendered the following decision, taken down in shorthand and now on file in the War Department with the Chief of Engineers.

OPINION.

There are two answers to the contention of the State of Illinois in this matter. The application, if I understand it—and it is rather informal than otherwise—is
5312 for this department to take no official action which may interfere with the state control of the water power, which may be developed in the Des Plaines River under a proposed improvement by the construction of a 14-foot waterway; and also to take no action which may interfere with the waterway as a waterway.

There are two answers to that. The department is not going to take any action, and has not taken any action. The advisory step, taken at the instance of Mr.

Snapp, or the persons who intended to put some sort of water power construction in the Des Plaines River, was extra official, and really was beyond the authority of the Chief of Engineers, except as he was accommodating to express an opinion in the interest of explanation. The truth is that the Des Plaines River, not being a navigable stream, no permit was necessary to put any obstruction into it which the War Department could prevent. But even if it had been a navigable stream, and even if the application had been made, and properly made to this department, to say whether this would interfere with navigation if the department concluded it would not interfere with navigation, then it is not within the power of the department to withhold its expressing such an opinion and granting such a permit, so far as the United States is concerned, for the purpose of aiding the State in controlling the water power. If the State has any control over the water power, which it may exercise in conflict with the claimed rights of the riparian owner, then it must exercise it itself, through its own legislation and through its own executive officers. All the United States does, assuming it to be a navigable stream, is merely to protect the navigation of the stream. With reference to the water power, it has no function except in respect to water power which it itself creates by its own investment in property that it itself owns; and then, of course, it may say how that water power shall be used.

But with respect to the water power on a navigable stream, which may be exercised without interference with the use of the river for navigation purposes; that is controlled by the laws of the State. It is controlled by the riparian ownership and by the common law as it governs those rights. Therefore I do not see, with reference to perform or which it can perform.

It has merely offered a friendly suggestion, with reference to a possible improvement of the river, which has not been authorized and which until it is authorized cannot be regarded as giving any right to this Government to interfere in the use of the stream, the proposed action of the private owners here would not be in conflict with such a plan. That is an expression of

an opinion with reference to existing plans, but not with respect to existing conditions.

Therefore what General Mackenzie has done, out of the kindness of his heart, does not commit this department to any assertion of authority in the matter and certainly does not carry us to the necessity of retracing our steps and saying that they shall go on with this when we had not any power to interfere at all.

It is not that we approve this; it is not that we disapprove it. It is that we have nothing whatever to do with it. That is the truth of it. If the State wishes to control the matter of the water power, then it is for the legislature, through which it can express that view, in so far as it may constitutionally affect it by legislation.

General MACKENZIE. That is virtually what was told the governor, Mr. Secretary, and this is the result of one of our endorsements.

Secretary TAFT. All right; I think that disposes of it."

Whereupon counsel for defendant offered in evidence
5315 extracts from a report by the Internal Improvement
Commission of Illinois to Honorable Charles S. Deneen,
Governor, February, 1907, published by the State Printers,
1906 (reading):

"From the end of the 'Twelve-mile level' to Lake Joliet, was seventeen miles—a mere surface stream over the rock bed—with a steep declivity over the lower half of the distance descending to a level 76.5 feet below Lake Michigan. Eight out of thirteen miles between the head of Lake Joliet to the head of the Illinois River at the Junction with the Kankakee, is occupied by two deep pools, Lake Joliet and Lake DuPage, with intermediate declivities of seventeen feet."

5316 (Reading, page 25): "The natural low water volume of the Illinois at Morris is nominal, not exceeding 250 to 350 second feet in 1887, practically at extreme low water, after allowing for canal water from Lake Michigan. A measurement of 456 second feet was made on the Kankakee river near its mouth, in September, 1867. Extreme low water at Wilmington for twelve years, 1871-1883, was estimated at 420 second feet. The Des Plaines River practically goes dry above Joliet. The Mazon was dry in 1867. The Fox measured 526 second feet in Sep-

tember, 1867. The canal authorities have measured a low water of 633 feet at La Salle.

Assuming an ordinary low water volume of 1,000 second feet, the effect of introducing 10,000 second feet from Lake Michigan, at Morris, will be to raise the water 5.2 feet above the Claypool plane, and for 14,000 feet to 6.9 feet."

Whereupon, Woermann, the witness for defendant, presented a table of discharge days compiled from the Riverside Gauge record, requested on direct examination, 5317 page 2599 (Abst., 1069). The table referred to being in words and figures as follows:

Objection reserved.

"COMPILED FROM THE RIVERSIDE GAUGE RECORDS.

Number of days when there was no discharge.	Additional days when there was 6 inches depth or less.
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1886

July	5 days.	June,	23 days.
August,	19 days.	July,	17 days.
September,	14 days.	September,	2 days.
October,	26 days.	October,	5 days.
November,	29 days.	November,	2 days.
December,	31 days.		

Total,	124 days.	Total,	52 days.
No record from January 1 to May 15.			

1887

January,	22 days.	May,	26 days.
June,	16 days.	June,	14 days.
July,	17 days.	August,	20 days.
		September,	13 days.

Total,	55 days.	Total,	73 days.
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1940

Defendant's Evidence.

Number of days when there was no discharge.	Additional days when there was 6 inches depth or less.
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5318

1888

September,	10 days.	September,	18 days.
October,	31 days.		
November	30 days.		
December,	31 days.		

Total,	102 days.	Total,	18 days.
No record from April 1 to September 1.			

1889

January,	10 days.	January,	4 days.
February,	23 days.	February,	5 days.
March,	5 days.	March,	9 days.
July,	4 days.	April,	7 days.
August,	12 days.	May,	10 days.
September,	30 days.	June,	9 days.
October,	31 days.	July,	4 days.
November,	28 days.	August,	2 days.
December,	4 days.	November,	2 days.
		December,	7 days.

Total,	147 days.	Total,	59 days.
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5319

1890

August,	10 days.	July,	8 days.
September,	14 days.	August,	21 days.
		September,	16 days.
		October,	31 days.
		November,	30 days.
		December,	27 days.

Total,	24 days.	Total,	133 days.
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Number of days when there was no discharge. Additional days when there was 6 inches depth or less.

1891

No Record Available.

1892

August,	8 days.	July,	12 days.
September,	18 days.	August,	23 days.
October,	24 days.	September,	12 days.
		October,	7 days.
		November,	30 days.
		December,	31 days.
<hr/>			
Total,	50 days.	Total,	115 days.
No record from January 1 to May 3.			

5320

1893

January,	14 days.	January,	17 days.
August,	27 days.	February,	14 days.
September,	30 days.	July,	23 days.
October,	14 days.	August,	4 days.
November,	11 days.	October,	17 days.
December,	11 days.	November,	19 days.
		December,	5 days.
Total,		Total,	
107 days.		99 days.	

1894

July,	18 days.	January,	15 days.
August,	31 days.	June,	28 days.
September,	13 days.	July,	13 days.
October,	31 days.	September,	11 days.
November,	1 day.	November,	29 days.
		December,	27 days.
Total,		Total,	
94 days.		123 days.	

1942

Defendant's Evidence.

Number of days when there was no discharge. Additional days when there was 6 inches depth or less.

1895

5321	January,	24 days. (a)		
	February,	25 days.	March,	4 days.
	June,	27 days.	April,	12 days.
	July,	31 days.	May,	25 days.
	August,	24 days.	June,	3 days.
	September,	10 days.	August,	7 days.
	October,	31 days.	September,	16 days.
	November,	27 days.	November,	3 days.
	December,	14 days.	December,	5 days.
Total,		123 days.	Total,	75 days.
		(a) No record first seven days.		

1896

June,	12 days.	January,	12 days.
July,	26 days.	February,	15 days.
August,	6 days.	May,	17 days.
September,	14 days.	June,	13 days.
		July,	4 days.
		August,	21 days.
		October,	15 days.
		November,	4 days.
		December,	16 days.
Total,		Total,	117 days.

5322

1897

August,	25 days.	May,	13 days.
September,	30 days.	June,	17 days.
October,	31 days.	July,	31 days.
November,	13 days.	August,	6 days.
December,	9 days.	November,	17 days.
		December,	22 days.
Total,		Total,	106 days.

Number of days when there was no discharge. Additional days when there was 6 inches depth or less.

1898

January,	11 days.	January,	12 days.
August,	10 days.	February,	9 days.
September,	13 days.	May,	20 days.
December,	8 days.	June,	7 days.
		July,	21 days.
		August,	21 days.
		September,	17 days.
		October,	31 days.
		November,	13 days.
		December,	15 days.
Total,	42 days.	Total,	166 days.

5323

1899

January,	2 days.	January,	26 days.
February,	21 days.	February,	3 days.
July,	4 days.	April,	8 days.
September,	11 days.	May,	8 days.
October,	14 days.	June,	13 days.
November,	10 days.	July,	8 days.
December,	12 days.	August,	18 days.
		September,	19 days.
		October,	17 days.
		November,	20 days.
		December,	12 days.
Total,	74 days.	Total,	152 days.

1900

May,	1 day.	January,	17 days.
June,	11 days.	February,	3 days.
July,	10 days.	April,	2 days.
		May,	25 days.
		June,	16 days.
		July,	21 days.
		August,	19 days.
		September,	13 days.
		October,	31 days.
		November,	19 days.
		December,	19 days.
Total,	22 days.	Total,	185 days.

5324

Number of days when there was no discharge.	Additional days when there was 6 inches depth or less.
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1901

November,	3 days.	January,	28 days.
December,	31 days.	February,	28 days.
		March,	4 days.
		April,	8 days.
		May,	22 days.
		June,	28 days.
		July,	29 days.
		August,	21 days.
		September,	30 days.
		October,	31 days.
		November,	27 days.
<hr/> Total,		<hr/> Total,	
	34 days.		266 days.

5325

1902

January,	31 days.	February,	1 day.
February,	27 days.	March,	15 days.
April,	2 days.	April,	23 days.
September,	11 days.	May,	6 days.
		June,	4 days.
		August,	18 days.
		September,	14 days.
<hr/> Total,		<hr/> Total,	
	71 days.		81 days.

1903

July,	4 days.	January,	16 days.
December,	25 days.	May,	24 days.
		June,	24 days.
		July,	14 days.
		August,	9 days.
		October,	6 days.
		November,	30 days.
		December,	6 days.
<hr/> Total,		<hr/> Total,	
	29 days.		128 days.

Number of days when there was no discharge. Additional days when there was 6 inches depth or less.

5326

1904

January,	19 days.	January,	4 days.
June,	23 days.	February,	2 days.
July	31 days.	June,	7 days.
August,	20 days.	August,	8 days.
September,	28 days.	September,	2 days.
October,	8 days.	October,	23 days.
November,	8 days.	November,	22 days.
December,	25 days.	December,	6 days.
Total,	162 days.	Total,	74 days.

1905

January,	20 days.	January,	11 days.
February,	25 days.	April,	4 days.
July,	4 days.	June,	7 days.
October,	6 days.	July,	21 days.
		August,	15 days.
		September,	10 days.
		October,	11 days.
		November,	18 days.
		December,	12 days.
Total,	55 days.	Total,	109 days.

5327

1906

May,	9 days.	January,	5 days.
June,	30 days.	May,	8 days.
July,	31 days.	September,	1 day.
August,	31 days.	October,	12 days.
September,	29 days.	November,	9 days.
October,	16 days.	December,	5 days.
November,	11 days.		
Total,	157 days.	Total,	40 days.

Number of days when there was no discharge. Additional days when there was 6 inches depth or less.

1907

August,	19 days.	April,	1 day.
September,	14 days.	May,	2 days.
		July,	18 days.
		August,	11 days.
		September,	3 days.
		October,	14 days.
		November,	22 days.
		December,	26 days.
Total,	33 days.	Total,	97 days.

5328

1908

June,	2 days.	January,	8 days.
July,	5 days.	February,	8 days.
August,	26 days.	June,	9 days.
September,	30 days.	July,	22 days.
October,	31 days.	August,	5 days.
November,	30 days.		
December,	31 days.		
Total,	155 days.	Total,	52 days.

1909

January,	23 days.	January,	5 days.
July,	3 days.	February,	6 days.
August,	9 days.	April,	6 days.
September,	18 days.	May,	8 days.
October,	29 days.	June,	15 days.
November,	7 days.	July,	27 days.
		August,	13 days.
		September,	12 days.
		October,	2 days.
		November,	9 days.
Total,	61 days.	Total,	103 days.

Number of days when there was no discharge. Additional days when there was 6 inches depth or less.

5329

1910

July,	12 days.	April,	6 days.
August,	30 days.	June,	15 days.
September,	28 days.	July,	19 days.
October,	30 days.	August,	
November,	30 days.	September,	2 days.
December,	31 days.	October,	1 day.
Total,	161 days.	Total,	44 days.

RIVERSIDE GAUGE READINGS, SUMMARY.

Year	Number of days when there was no discharge	Additional days when there was 6 inches depth or less.	Total
1886	124	52	176
1887	55	73	128
1888	102	18	120
1889	147	59	206
1890	24	133	157
1892	50	115	165
1893	107	99	206
1894	94	123	217
1895	213	75	288
1896	58	117	175
1897	108	106	214
1898	42	166	208
1899	74	152	226
1900	22	185	207
1901	34	266	300
1902	71	81	152
1903	29	129	158
1904	162	74	236
1905	55	109	164
1906	157	40	197
1907	33	97	130
1908	155	52	207
1909	61	103	164
1910	161	44	205

5330

At Transcript 2476 (Abst., 1031), I testified that I am assistant engineer of the Western Division of the United States army. That is not error. I am the United States assistant engineer to the Division Engineer of the Western Division of the United States army, and not an army officer.

Q. What compensation do you receive as assistant to the Division Engineer of the Western Division?

Objection; incompetent, irrelevant and immaterial.

A. \$300 per month and expenses when in the field. Lieutenant Colonel Charles L. Potter is acting Division Engineer. I am the only assistant engineer in the Western Division office. From June 1, 1899, to October 1, 1899, in connection with the survey of the waterway from Lake Michigan to La Salle, I was part of the time recording, part working on maps and computations, and part of the time doing instrument work in the field. That was just subsequent to my graduation from Washington University, before I took my final degree.

By recording I mean taking down notes for the men who ran the instrument. If the man in the field took a measurement, or sight, I recorded the angle and distance and made sketches necessary to amplify notes. Part of the time I ran the level, in determining high water marks from Joliet to La Salle, not in a continuous line. After finding a high water mark, would locate the nearest government bench mark, and run from that bench mark to this high water mark.

With reference to the expression that I did this part of the time and part of the time I recorded; as to who was my superior for whom I recorded the measurements will say I do not recall his name.

5333 As to what proportion of the time I would say I was recording and what proportion of the time I was running a level would say that I did not record very many days. I ran the level more than I recorded, and I was in the office more than I did either one, on the maps and computations and estimates. The office at that time was at 123 Van Buren street, Chicago. My work on the maps was platting notes and doing all work necessary to making a complete map.

As to whether I would say that my work in the office was the work of a draughtsman, I would say it was the work of an engineer draughtsman, particularly so far as the map work was concerned. Of course the work I did on computa-

tion and with instruments would not be called a draughtsman's work.

Q. What compensation did you receive in that position?

Objection; incompetent, irrelevant and immaterial.

5334 A. Was engaged on a salary of \$75 a month; the end of second month received \$100, the first intimation of increase and that salary continued for three months. I was employed on Missouri River from June, 1890, to January 1, 1891; the first part of the period as first recorder on secondary triangulation. For five months was engaged with level party establishing permanent bench marks between Galatin, Montana, and Fort Benton, Montana. Was in field all that time. The men in charge of that expedition were on the work between Sioux City and Omaha, Mr. O. B. Wheeler, U. S. Assistant Engineer; on work in Montana, G. A. Marr, U. S. Assistant Engineer. Secondary triangulation party had about seven men. On level work I had two rod men
5335 and an extra man. I did recording on level work, which were known as w-y-e levels.

Q. What compensation did you receive while on this Missouri work.

Objection; incompetent, irrelevant and immaterial.

A. I think \$90 a month and subsistence at first, and later \$100 a month and subsistence. Some of my work was north of Sioux City, and some south of that point. My duties as assistant to Division Engineer Potter are, to read over mail that comes to the Division office, make notes on it before submitting it to Division officer, and attach my memoranda giving my opinion as to all projects, specifications, plans and estimates. In some cases I write out endorsement, and have it ready for the officer to sign; where there is no ques-
5336 tion what action shall be taken. Where it is too voluminous, I write it out and sign it, and it goes forward to chief of engineers over my own name; the Division Engineer referring to accompanying notes of Assistant Engineer Woermann.

Q. What are the duties of Colonel Potter as Division Engineer as to rivers, places and so on?

Objection; not cross-examination.

A. There are seven districts in the Western Division, as follows: St. Paul, Rock Island, St. Louis, Little Rock, Vicksburg, Kansas City and the second Chicago district, which includes from one to seven or eight rivers and canals or in all about 35 rivers and canals.

The St. Paul office has charge of the Mississippi, above St. Paul; also the Minnesota river, and St. Croix river.

5338 As to Potter's duties in reference to these various districts as Division Engineer, all projects, plans, estimates, specifications, examinations and reports forwarded him by district officers pass through office of Division Engineer for examination and recommendation before going to Chief of Engineers for his endorsement. I look them over before the Division Engineer does. For illustration, yesterday I submitted plans and specifications for a movable dam, and for lock gates at lock and dam number 6 on the Ouachita river, on which I spent over a week. Potter remarked he had no time to go through it himself, and if I had gone through it thoroughly, he would endorse it, stating he recommended approval and call attention to the accompanying notes by me. Those consisted of a volume of specifications and about seventeen sheets of drawings. They were sent in by the district officer at Vicksburg. I passed them with my suggestions.

5340 I was employed on the Hennepin canal, January 1st, 1891, under U. S. Assistant Engineer Wheeler, and part of the time under Assistant Engineer James C. Long.

From January 1, 1891, to July, 1892, I was under Engineer Wheeler. My duties during that time were to have charge of parties making surveys for the location of the western section of the Hennepin canal around the lower rapids of Rock river and in connection with the platting of notes and in preparing of plans and estimates. I presume that two-thirds of the time I was in the field, I cannot tell definitely as to that. Mr. Wheeler determined where the surveys were to be made. He had general charge and directed me as to all that I was to do, as to the running of lines and things of that sort.

As to whether I would say that I was a surveyor at 5341 that time I would not designate it in that way. It was more than simply running of lines. The man in charge of the party had to use judgment as to where to run them. It was the work of an engineer. The lines were being run for the location of the canal, and the location of two dams across Rock river in that vicinity, the location of the locks, bridges, culverts and Taintor gates. As to whether I submitted the results of my survey to Mr. Wheeler and he determined where these locks and dams would go in, would re-

ply that his recommendations were subsequent to mine naturally.

As to whether Mr. Wheeler was not in charge of the work and he simply an engineer under the district engineer, would say in a case in which the United States is one of the parties I do not like to discuss the relations between the assistant engineer and the army engineers.

5342 Q. There is a distinction is there not between the assistant engineer and the army engineers, what is that distinction?

A. Well, the principal distinction is the one you yourself enumerated.

Objection; incompetent, immaterial, irrelevant, not proper cross-examination.

A. The army engineer is educated at the expense of the government and has a permanent position for life; the civilian engineers are educated at their own expense and are kept only so long as their services are satisfactory and are required. The army engineers are the ones that are responsible to the government and have general supervision over these various works that are being carried on by the government, and the assistant engineers are subject to the supervision of the army engineers. Assistant Engineer Wheeler on the work on the Hennepin canal was then, and is now, subject to the army engineer in charge of the district in which the canal is located. As to whether the district engineer is responsible for all of Engineer Wheeler's work, would say I don't understand it that way. I understand it that if anything goes wrong the army engineer very frequently places the responsibility on the assistant engineer; if everything goes right he does not.

5343 Q. What compensation did you receive for this work under Assistant Engineer Wheeler?

Objection; incompetent, irrelevant and immaterial.

A. Began at \$100 a month and subsistence in field; then \$125, and later \$150 and subsistence in field; most of the time I was on Hennepin canal, received \$150 and subsistence. From July, 1892, to November, 1895, was resident engineer in charge of construction of guard lock at head of lower rapids in Rock river; of construction of the fourth and fifth miles involving construction of 4000 feet of canal in bed of Rock river; construction of Taintor gates at mouth of Mill creek, and two dams across Rock river at head of rapids. Miscellaneous earth work, rock excavation, levee

work, pile driving and so forth. Was responsible to Assistant Engineer Wheeler.

Q. He in turn was responsible to the district engineer?

Objection; incompetent, irrelevant and immaterial.

A. Yes, sir. The section of this canal around the lower rapids, completed in November, 1895; some work done on it after open to navigation. I had charge of it during that period; completed the rip-rapping of banks, and improvement of lock grounds, and dredging outlet into the Mississippi at the lower end and into the Rock river at the upper end; looked after the operation of three locks and two bridges, Taintor gates, and all other structures connected with that portion of the canal.

5345 Some commerce passed through from November, 1895, to July, 1896. Cannot say definitely how much. On the government work I had a steamer and some barges. There were some steamboats from Rock Island and Davenport that transported coal from the coal mines on Rock river over to Davenport, Rock Island and Moline.

Q. How much tonnage would you say they carried, give us some idea of what it was?

Objection; incompetent, not proper cross-examination, irrelevant and immaterial.

A. There were two or three boats towing coal, each with about two barges; barges holding 80 to 100 tons.

In July, 1896, I made survey for dam across Rock 5346 river, under Wheeler. I made topographical survey, staking out the flow line, describing various tracts of land overflowed and preparing plats and descriptions of them. Dam located across Rock river between Sterling and Rock Falls, known as feeder dam for Illinois and Mississippi canal.

In November, 1896, engaged in dredging on Chicago river under Assistant Engineer G. A. M. Liljencrantz, the same gentleman who has testified in this case. I took soundings of river, determined places dredging was to be done, saw that dredges got there, and took material out, saw that they did not take too much, measured the scows, kept track of each scow, if it was not full, made deduction, saw that it was taken 5347 out of the river into Lake Michigan, and made up monthly estimates on which the contractors were paid.

Q. What compensation did you receive in that capacity?

Objection; incompetent, irrelevant and immaterial.

A. \$90 or \$100 per month. That was the period immediately following veto of river and harbor bill by Cleveland. Government engineers were very lucky to get any work at all. Only a very few were retained.

Liljenerantz was under Captain Marshall, in charge of this district. I was transferred from Illinois-Mississippi canal because there was no more money to prosecute the construction; was retained during the interval by employment on Chicago river. When money was again available, went back on the Illinois-Mississippi canal. Am still in government service. Was in employ of government on that canal during most of 1897, subsequent to May. Made surveys for location of canal from Mineral, Illinois, west to Rock river. Then was resident engineer in charge of various sections; part of time miles 24 to 28 inclusive, on eastern section; part of the time on construction of feeder south of Rock river, and in charge of other portions of canal. Was under Assistant Engineer Wheeler, and part of the time under Long. Marshall was army engineer in Chicago in charge of district.

Q. What was your compensation for this work?

Objection; incompetent, irrelevant and immaterial.

5349 My compensation, as I recall it, was \$150 per month and subsistence while in the field throughout this period.

It would be proper to say that from January 1, 1891, until October, 1902, I was employed as the assistant engineer of the United States in reference to various government work; that part of my time, with the exception of the four months, was work upon the Hennepin canal, otherwise known as the Illinois and Mississippi canal, excepting for some minor outside work which I did for various parties during that period. I did other work besides my professional work for the government service during these eleven years. As to how extensive that work was, would say it was mostly in connection with drainage work, making surveys and estimates for drainage. I was employed regularly by the government at a compensation varying from \$100 to \$150 and subsistence 5350 during these eleven years; the other work that I did during the eleven years was quite irregular, I cannot give you any definite statement as to that.

As to whether it was so extensive that I was obliged to secure a furlough from the United States in order to engage in it, will say that occasionally I secured leave of absence on smaller pieces of work, I would do it after government hours

or on Sundays or holidays with the exception noted. With the exception that I noted it would be fair to say that practically all my entire professional experience from 1891 to 1902 was in reference to this construction work on the Illinois and Mississippi canal.

Q. The only other experience prior to 1902, Mr. Wierman, was carrying a line on the Missouri river survey, was it not?

COUNSEL FOR DEFENDANT. That is not a fair statement of what the witness said.

COUNSEL FOR GOVERNMENT. If it is not he may correct it. Read the question.

(Question read.)

5351 A. I would say instead of level line, I would say surveys and computations on the Missouri river. The testimony clearly shows it was not limited to a level line, although that was the principal part of it.

As to how far I was personally responsible in any of these enterprises for the lines that we ran, I would say I was responsible for these to the extent of my job. In every case my work was under the supervision of the district engineer of the United States. It might be stated that the United States would look to the district engineer as the person responsible for the work that I was doing, although as I stated before the army engineer holds his job for life so that it would admit of some modification. The construction work on the Hennepin Canal was begun in July, 1892, and completed in 1907. The length of the main line of the canal is 77 5352 miles, and of the feeder about 29 miles.

From 1902 to 1905 I was employed by the United States again in charge of the survey for the 14-foot waterway from Chicago, Illinois, to the Mississippi. My superior was nominally a board consisting of five engineer officers, of which Colonel Ernst was the chairman. It was practically under Col. O. H. Ernst. The district engineer at the time was Lt. Col. Willard when the survey was started.

As to who were the other four members of the board, would say that two of them I never saw but once, and that was when I was appointed. Two others whom I saw oftener were Maj. Thomas I. Casey and Col. W. H. Bixby. The personnel of the board was changed on two occasions; once on account of death and once of account of retirement. Col. Ernst did not succeed Maj. Willard on the board. Maj. Willard was not

at one time a member of the board. My headquarters
5353 were at Peoria after most of the field work was completed. The field work was completed by March 1, 1904. My headquarters prior to that time was upon one of the quarter boats upon the river. I moved my quarter boat along with the parties, all the way from the mouth of the river up to La Salle but the quarter boat never went above La Salle. I had occasion to collect a great amount of data in connection with the lower Illinois river, and this data was used by me in the preparation of a report to the Board of Engineers. I have secured data from the Sanitary District in reference to the Desplaines river and the Sanitary District channel and this was made use of in making out the report which I made
5354 to the Board of Engineers. I secured from the Sanitary District gauge readings at a number of points, the points being indicated clearly in my report at the top of each table. These gauge readings were all above La Salle. I used all the gauge readings of the Sanitary District above La Salle, from there to Chicago that they gave me. I presume they gave me all they had. My official title at this time was an assistant engineer, I should add to that that Col. Ernst presumed that he was appointing me an assistant engineer when I took charge of the work, but the civil service commission notified him that I could not be appointed to that rank until I had passed an examination, so as soon as the work permitted I took that examination and passed it and so got the higher rank. I would say the Sanitary District furnished me all their records and data in reference to the upper Illinois and Desplaines river that I asked for, but as to whether they gave me all they had I cannot say.

5355 As to whether I made very little other investigation above La Salle in reference to the upper Illinois or the Desplaines river in the preparation of my report, would say that I can hardly answer that by yes or no. The previous board, known as the Barlow board, had made a survey from Joliet to La Salle in 1899 and 1900, Col. Ernst decided it was not necessary to make a resurvey and instructed me to correct the maps of the Barlow board, and for that purpose I had parties go over the territory and we did make a great number of corrections and additions on every one of the sheets. Of course the triangulation work and precise level work was carried through under my direction, because that had not been done in connection with the previous survey. On that precise

level work I was not personally present, I had parties in the field who ran these levels and made reports to me which I received from time to time. From October, 1905, to July, 1908,

I was not in the government service. A part of the 5356 time I was in private practice at Peoria and part of the time on the construction connected with the Economy Light and Power Company work at the mouth of the Desplaines.

As to when I first commenced working for the Economy Light and Power Company, I would say I did not work direct for the Economy Light and Power Company until after the state case came up. I was in charge of the construction at the mouth of the Desplaines river under Chief Engineer Daniel W. Mead. My first employment for the Economy Light and Power Company was in January or February, 1908. From October, 1905, to January, 1908, I was engaged in private practice at Peoria. When I went to Peoria in October, 1905, I opened an office as consulting engineer in the Observatory Building and was employed in making examinations, surveys and reports.

As to whether I acted a great deal as an expert witness 5357 in litigation in cases in which the flow of the Illinois river was involved and particularly in suits against the Sanitary District, will say that I acted in that capacity in connection with the suit of W. R. Curran against the Sanitary District. I prepared data for a number of other cases against the Sanitary District.

As to whether that data which was used was prepared chiefly from the data which I obtained from the Sanitary District at the time I was connected with the Ernst board, I would say you need not put it that way, it was prepared from the data that I became familiar with in making the 14-foot waterway from Chicago to the Mississippi river.

Q. The principal contention in those cases was the fact that the Sanitary District had turned a lot of water into the Illinois river which was causing this damage, was it not?

Objected to as incompetent, irrelevant, immaterial and not proper examination.

A. Yes, sir.

Q. Mr. Woermann, why did you leave the government service in October, 1905?

Same objection.

A. Because I objected to taking the work to which 5358 the government wished to assign me.

Q. At the time you left the government service did you have this line of work in mind at Peoria?

Same objection.

A. No, sir.

Q. Did you have any other line of work in mind?

Same objection.

A. I cannot say that I had any particular line of work in view. I should modify that, I should say that I did have in mind that my experience on the river there would make me particularly well qualified to go into the question of draining those large swamp areas on the Illinois river. I was pretty well posted as to the flow on the Illinois river and as to the effect that the turning in of the Sanitary District water had had upon that river.

Q. Prior to your leaving the government service had you been approached by any one in reference to acting as an expert for any one in case they got into litigation with the overflow?

Same objection.

A. I cannot say definitely. I think it was about the
5359 time I left the government service that I was approached by Judge W. R. Curran in regard to assisting him in the matter of damage suits against the Sanitary District.

5360 To go more into detail, the nature of the work that I did while in private practice at Peoria, the principal work that I did at that time was in the capacity of resident engineer in charge of the construction of the McKinley Bridge over the Illinois river at Peoria. In addition to that I made a number of surveys—land surveys—mine surveys, reports and examinations of a number of re-enforced concrete structures including the Majestic Theater; re-enforced concrete stacks for the Peoria Marble Company; another for the gas company; two for the Illinois Traction Company. I did not design this bridge referred to, I erected the bridge.

As to whether it is not a fact that this bridge was erected by private parties under contract with the Illinois Traction Company, I would say certainly. I have stated that
5361 I was the resident engineer in charge. To state just what my duties were in reference to the bridge would say that I made a survey in the first place to determine the best location for bridge; made borings in river bed to get data from which piers were designed and drawings prepared; gave

lines and grades for piers, and approaches, superintended construction and inspected material; took greater part of my time for over a year.

Q. What compensation did you receive for this work?

Objection; incompetent, irrelevant and immaterial.

A. Received \$200 a month for my superintendency of the bridge work.

Q. What was the total remuneration received by you
5362 while in practice outside of Government service at Peoria?

Objection; the same.

A. Could not state that. Do not think it fair to say was obliged to give up private practice, because my office as consulting engineer was not a financial success. This all depends upon what one considers financial success. Think it fair to say I was not satisfied with it, or, of course, would not have taken something else.

Q. Would it be fair to say, that you received greater compensation during your private practice at Peoria, than you received while you were in the government service?

Objection; the same.

A. Well, they were so nearly the same, I do not know off hand; it fluctuated.

5363 Took charge of construction work of Economy Light & Power Company, in July, 1908, but I was employed with Chief Engineer Mead, in July, 1907. Work was in connection with dam, power house, levees, bridges and other work. I was an expert witness on behalf of defendant in case of *People v. Economy Light & Power Company*.

5364 Construction of dam was begun in July, 1907. I was first employed by the Economy Light & Power Company in January or February, 1908, when it began the preparation for the state case.

As to whether I was not in the service of the defendant prior to the institution of the state case, would say directly I was not. Indirectly I was. I was employed by Mr. Mead in the construction work. In connection with the preparation for the building of this dam. I understood Mr. Mead
5365 was in the service of the Economy Light and Power Company. Not, however, I think on a salary basis. Such work was done on commission basis. The basis of my arrangement with Mr. Mead was on a salary.

Q. What was the salary?

Objection; incompetent, immaterial and irrelevant.

A. \$200 a month.

People v. Economy Light & Power Company, I believe, was commenced in December, 30th, 1907. At that time portions of the dam had been erected; the earth portion at the north end. The only portion extending into river was coffer dam. In state of nature, at low water river at that point was 250 to 300 feet wide; at high water probably 2,000 feet. Cofferdam situated on north or west side of river, right side as you descend. Cofferdam extended into river at up stream corner probably 150 feet, from low water shore line. That is about 150 feet from the river bank. Cofferdam is two or three hundred feet above junction of Kankakee and Desplaines. The end of the coffer-dam would probably be about 150 or 175 feet from opposite bank before that was blasted away. Did not measure how much was blasted. Current carried away a great deal. As to the present condition of the river at that point, as compared with what it was in a state of nature, as to the depth of the portion of the river between the coffer-dam and the opposite shore and the entire river as it was in a state of nature, will say I have not seen that point for two and one-half years. Then the river was about half as wide, possibly a little less than half at that up stream corner prior to putting the coffer-dam in the river. Bottom of river bed is rock, limestone rock, sand stone and glacial drift. North bank consisted of black loam underlaid by glacial drift and sand stone, and south bank probably similar; never excavated into any rock on that side. Had not gotten to that stage. Made a number of borings, test pits down to the rock. The bank is low on both sides, back to the Illinois and Michigan canal. The canal cut across a low projecting point by the dam. There must have been 250 or 300 feet between canal and river at that point. The balance of the two or three hundred feet, I spoke of as being the width of the river, in times of high water, would come off of the other side.

I am not certain that I recall, not certain, but I think that I have the data as to the height that it was proposed to erect this dam above the low water mark. The crest of the spillway was at elevation 77.0 Hennepin datum.

As to how that would be interpreted in the language of the low water in the state of nature at the mouth of the Des-

Plaines river will say I can give you that if you have here the profile which I prepared in connection with the 14-ft. waterway survey.

Whereupon counsel for the government requested the witness to refresh his memory upon the subject and answer the question at a later time.

My duties in connection with the preparatory work under Mr. Mead at the site of the dam were that I staked out the work and tested the materials; kept track of the time whenever the work was done on force account, and kept track of the quantities; in general, saw that the specifications were carried out and complied with.

5370 I did not prepare the plan of the dam, that was prepared by Mr. Mead. Mr. Heyworth had the contract for the construction of the work. I was not working under Mr. Heyworth and was not in his employ. Prior to January, 1908, during my employment upon the construction work for the proposed dam of the Economy Light & Power Company, I was under the supervision and direction of Daniel W.

5371 Mead. I presume Mead had a contract with the Economy Light & Power Company, I do not know what their relation was. I know that Mead was Chief Engineer, and I was under him to see that the work was carried out in accordance with plans and specifications. Mead was located in Madison, Wisconsin. From July, 1908, to February, 5372 1909, was in employ of United States as assistant engineer, preparing plans and estimates for 14-foot waterway from St. Louis to Cairo. I was an assistant engineer of the United States. Was employed under the direction of engineering board, consisting of Bixby, Townsend, Warren, Richardson, and Ritter. Col. Bixby, who was district and division engineer, was my immediate superior in the service. He was located at Chicago when I began work; came to St. Louis, October, 1908.

Q. What compensation did you receive during that time, as assistant United States engineer?

Objection; incompetent, irrelevant and immaterial.

A. At first \$225 per month, and later \$250 a month. From February, 1909, until present, have been employed as assistant engineer to division engineer at St. Louis; first under

Bixby, then Colonel Fisk, and recently Lieutenant Colonel Putter. Hold that position at present. My present 5373 compensation is \$300 per month. Potter is district and division engineer.

I prepared to testify in this case a short time before I came up here on April 14th. I worked at it irregularly outside of Government hours; perhaps devoted 20 or 30 days to the preparation. Read Cooley's testimony. Spent some time checking up his work and preparing my own technical tables.

5374 Q. Did you originate the points made by you in reference to Mr. Cooley's testimony or were they suggested to you?

Objection; incompetent, irrelevant and immaterial; does not indicate point counsel has in mind; impossible for witness to know.

A. Perhaps I originated some of the points. Am not sure I understand the meaning of question.

Q. Take for example table Cooley introduced into the record with reference to number of days at which the Riverside gauge stood at a certain height. Was it suggested to you that that was inaccurate or that another result might be obtained if you left out the winter months, or did you figure that out yourself? Did you suggest that to counsel?

A. Well, I made suggestions of that kind. Do not know whether they were thought of independently of that or

5375 not. I think they were. At least I know some were.

After examining Cooley's testimony, and that of other experts in this case, I made some suggestions to counsel as to what additional data might be introduced, and what technical tables worked out, to show that the Government was erroneous in their contentions. I consulted counsel in regard to engineering features. Cannot say that I did as to proper handling of case. They consulted with me as to engineering features. I was compensated for my work for preparing to testify in this case. I have been and expect to be paid from

5376 \$25 to \$50 a day, depending on nature and continuity of employment for my service as an expert witness in this case. That applied to my service prior to taking the stand as an expert witness. Cannot tell from that what amount of time I spent in preparing to testify without looking up my records. Made no effort to fix those times or periods in my mind. Am unable to repeat the amount received, without referring to my records. I think it would

5377 be between \$800 and \$1,000, which covers my entire service to date, in connection with this case.

Whereupon the attention of the witness was directed to House Document No. 263, being report upon the 14-foot waterway, pages 16 and 41, and following, as set down in transcript

1473 (Abst., 624), 1474 and 1479. Part of that report written by me extends from page 21 to 70, inclusive. Of the 5378 Appendix A-9, that is my report proper. Then most of these appendices were prepared by me, and some others which were not published.

Whereupon, at request of counsel for complainant, witness read the paragraph entitled "Velocity of current in the Upper Illinois and Lower Des Plaines Rivers During Extreme High Water," page 40 (reading):

"In order to ascertain whether the currents which obtain in the upper Illinois and lower Des Plaines rivers during extreme high water would prohibit navigation at such times, the velocities were computed at 16 points between Utica and Joliet for the highest water on record for each station. These results, which are shown in the following table, are based upon the following field measurements, and are entirely independent of any assumptions or theories."

The table which appears on page 41, and also set out at page 1476 of the record (Abst., 626), is the one referred to in the passage just read. At page 41 of this report, after stating the various velocities, occurs this sentence: "There are two exceptions to this, viz., at the mouth of the Desplaines river and 5379 at Treat's Island, where it is impossible to compute the velocity, as there are not sufficient data on hand. It would probably not exceed 4 miles per hour, at either place, for a distance of about one-half mile," which refers to this table of velocities computed here. These statements which have been called to my attention were made in my official capacity as Assistant United States Engineer. I stated in substance on those two pages, "that these velocities which obtain during high water are prohibitive only in two places, to-wit, below the Marseilles and Joliet dam." I testified on my direct that the table to which my attention has been called, referred to high waters that would obtain if the conditions were changed as proposed in the fourteen foot waterway report. I see nothing to be reconciled between that 5380 statement with the passage to which my attention has been called, particularly this statement beginning, "These results which are shown in the following table, are based upon the following field measurements and are entirely independent of any assumptions or theories."

Q. If the waterway had not been constructed they could not measure them, could they?

A. Why not? If you get the bottom as it existed, and the water surfaces as they existed in a state of nature, and then drew in your proposed bottom for whatever portion of the river that covers. You have got to have the survey data to start from.

Q. This statement says that these are actual measurements and not assumptions?

COUNSEL FOR DEFENDANT. No, it does not say so, it says "based upon the following field measurements." It speaks of them also as computations.

COUNSEL FOR COMPLAINANT. He says they are in no way assumptions. It says:

"These results which are shown in the following table are based upon the following field measurements and are entirely independent of any assumptions or theories."

COUNSEL FOR DEFENDANT. Just above that.

5381 COUNSEL FOR COMPLAINANT:

"In order to ascertain whether the currents which obtain in the upper Illinois and lower Desplaines rivers during extreme high water would prohibit navigation at such times, the velocities were computed at sixteen points between Utica and Joliet for the highest water on record for each station. These results"—namely, the computation of the highest water on record at each station—"which are shown in the following table are based upon the following field measurements and are entirely independent of any assumptions or theories."

COUNSEL FOR DEFENDANT. But you put a wrong construction upon it. The passage does not so state.

COUNSEL FOR COMPLAINANT. Just let the witness answer.

COUNSEL FOR DEFENDANT. When you are misstating, I object to the question.

COUNSEL FOR COMPLAINANT. Well, the witness may answer. Read the question.

(Question read.)

Q. Does not that report in house document No. 263 refer to actual measurements, and to the velocity as it existed at that time from the high water of previous years which they had actually measured, and not to the condition that would exist when the changes were put into effect?

5382 A. Those velocities refer to velocities which would

obtain if this waterway was constructed. It is evident by inspection of the maps and plans that it was intended to deepen the river at many points.

As to why if I had meant the velocities that will obtain I did not put in there the future tense instead of putting in the present tense "that do obtain," and being asked why I said that these were computed from the highest waters at these 16 points and were not based upon assumptions, if it was to be upon an assumed bottom, would say that that style of composition is very commonly used. I think in a moment I can probably call your attention to some other instances.

COUNSEL FOR GOVERNMENT. I do not care for any other instances. I want you to explain that particular passage in view of your interpretation of it.

COUNSEL FOR DEFENDANT. The circumstances might explain.

The WITNESS For instance on page 44, which is the first one I notice, under locks, the third paragraph begins as follows: "The foundations of the locks rest on bed rock." As a matter of fact they did not rest at that time. It means when they are put in they will rest on bed rock. Perhaps that is not the best style of English to use, but I use it a great deal and others also.

5383 Q. What is the meaning of the sentence: "And are entirely independent of any assumptions or theories."

COUNSEL FOR DEFENDANT. Objection; misstates the record. He does not set them out as actual measurements; he says they are based upon measurements and computations here referred to in the sentence before; before that is the sentence speaking of velocities to be expected; the future tense; just what you have asked him as to why he did not use it.

A. What I mean by that is: in many cases of preliminary plans or estimates, we have not as much data as I had here. You assume some, which I had here determined by actual observation in the field. High water elevation was not an assumed but an observed elevation. The discharge was not assumed or a computed discharge. It had been actually

5384 measured in the field. The slopes and elevation of the water surface were known from actual observation. I still adhere to the interpretation I put upon that table in my direct. I have no further data which I procured subsequent to the publication of that report, as to the velocity which obtained at Treat's Island at the mouth of the Desplaines. Made no measurement at mouth of Desplaines or Treat's Island, subsequent to publication of report. The supplemental

data I secured at mouth of Desplaines is in field books, turned over to Chief Engineer Mead when work was suspended. It was prepared by me while working under Mead, and given to him during the employment.

5385 In house document 263, page 41, I show in second column the years in which various records were obtained. For example, at the Jefferson street bridge I show year 1904 the elevation was 533.6 Memphis datum; the area of the cross section 2,016 feet; discharge 22,000 feet per second; the feet per second of the mean velocity 10.91; and the miles per hour 7.4 miles per hour.

As to whether that refers to the year 1904 when that velocity of 7.4 obtained at Jefferson Street bridge in Joliet, would say that that volume of 22,000 cubic feet per second was what occurred in 1904.

As to whether that volume of 22,000 cubic feet, running through that cross section at Jefferson Street bridge in 1904 produced that velocity of 7.4 miles per hour, would say that it does not say that that was the cross section in 1904.

As to whether it would be a fair interpretation to say that in 1904 with the discharge of 22,000 cubic feet per second there was a velocity of 7.4 at Joliet, I would say that if you had that profile here I might throw some light on the subject. As far as I recall now, I think there was ex-

5386 cavation in the bottom at that point. At the mouth of Des Plaines river and at Treat's Island are the two points where the greatest difficulty is experienced in passing down the river on account of the shallowness of the water. It would make a difference as to whether it was high water or low water. Assuming for the purpose of answering that the condition in the Des Plaines river is the same today as it was two and a half years ago when I was familiar with it, I do not think there was any particular difficulty about insufficient depth for skiff two years and a half ago at either point.

5387 I computed the depth at these two points. As to what it is, there are no two alike—they vary. They are given on my maps which accompany house document No. 263. Photo-lithographs. As to whether this data in reference to these two points was computed by me personally or computed by engineering parties sent out by me, would say that the depth as it would have been in 1901, the first year after the Drainage Canal was opened, was computed under my direction in my office.

Q. You did not personally make the soundings at either of these points, did you?

A. I did not say anything about anybody making them. I said they were computed.

Q. Well, just answer my question if you will. Just read the question, Mr. Commissioner.

(Question read.)

A. I do not understand that question.

Q. If I understand you correctly all that was done during the period from 1902 to 1905 when you were connected with the Ernst Board was the adoption of the
5388 Barlow Board survey of a previous date, and making the soundings of the Barlow Board correspond with the level of the water as determined in 1901; is that correct?

A. No, sir.

Q. Then will you please explain what was done during the survey of 1902 to 1905 in reference to the ascertaining of the soundings?

A. The maps made for the Barlow Board do not give any soundings; they gave elevations on the bottom of the river. And I had the 1901 water surface computed and platted, and the depths computed from the bottom elevation, and the estimated elevation of the water surface. Removed all of the bottom elevations which were on the maps of the Barlow Board, and put on the soundings as they had been computed under my direction. The parties under my direction during the period from 1902 to 1905 did make actual soundings in the Des Plaines river. They made soundings at each of the bridges and at each of the sections where discharge measurements were taken. As to whether the maps were based not
5389 upon the soundings but upon the survey of the Barlow Board, I would not say that the maps were based on soundings of anybody. The maps contain the soundings that were computed in the way I have just described.

As to whether the maps so far as the soundings are concerned depend not upon the soundings made by me but upon the soundings made by the Barlow Board I would reply that if you insist upon using the word "depend" why, yes, but still adhere to my former remark. I personally made none of the soundings, neither at Treat's Island nor at the mouth of the river during the government survey. In 1889 Captain Marshall made a new survey and corrected the previous survey of 1883. Work done under his direction. Entirely new survey made from Joliet to Lake Michigan. Below Joliet

maps of Benyaurd survey of 1883 were utilized. Under 5390 Marshall, supplemental work was done at Treat's Island; at Marseilles gauge readings taken, high water marks determinel, and so forth. Have no personal knowledge whether Barlow's survey was new one, or was an adaptation of Sanitary District survey of 1894, by Keating, so far as Desplaines river is concerned. That is I have understood from report and others connected with it.

The only reports I have ever made over my signature, which are published by the government as official documents, are on the fourteen-foot waterway under the direction of the Ernst Board, and fourteen-foot waterway from St. Louis to Cairo by a lateral canal; a report for canal by means of movable dams and locks from St. Louis to Cairo. Other reports were made by me to my superiors and adopted by them in 5391 their reports. Only published document have ever made in reference to Desplaines was fourteen foot waterway report to Ernst Board. I made an unpublished report on Desplaines river, on which 1911 board report is based; plans and estimates for an eight and nine foot waterway from the lakes to the gulf under direction of Bixby Board. Has never been published over my name. Figures which appear in printed document issued this year are prepared by me.

In 1889 I took a rowboat and descended the Desplaines from Adams dam to the mouth, down to the Illinois 5392 river. Made one trip in 1889 between those points. It would be a fair interpretation to say that in 1904, with a discharge of 22,000 feet per second, there was a velocity of 7.4 at Joliet. It would not be the same as applied to other points given in table, for example, 1 $\frac{3}{4}$ miles below Brandon's bridge 1904 velocity 2.3 feet, because at Jefferson street bridge did not contemplate using river as navigable waterway. Simply increased depth to make up for what I cut off side to get 160 feet width of canal. Deepened natural bed enough so would not increase natural velocity. Was no reason why United States should be put to expense of reducing natural velocity because it was not to be used as navigable waterway.

The velocity given there of 2.3 miles per hour at 1 $\frac{3}{4}$ miles 5393 below Brandon's bridge, would not be the velocity in the unchanged state, because at that point it was intention to deepen bottom. It was intention to deepen bottom at Jefferson street, but there the bottom was deepened only sufficiently to compensate for what I took off side to secure width of 160 feet for waterway. Illinois-Michigan Canal only 60 feet

wide; had to add 100 feet to that; reduced width of river 100 feet. Table does not refer to past tense at Jefferson street, and future tense at $1\frac{3}{4}$ miles below Brandon's bridge. It shows what velocity will be when 14-foot waterway is carried out on plan given in report. At Jefferson street bridge it happens it is past tense as you expressed it; but it is future tense in every case.

Table does not represent actual computation of what velocity has been, but represents computation of what it will be under changed condition, if 14-foot waterway proposition is put through. Do not recall that I computed any preparation of that report to Ernst Board what velocities actually were at those various points. Computed future velocities on basis of data stated in context, the floods of various years set out in table. Volume shown in table of volumes, represent actual volumes of respective years. For example, the Utica Highway Bridge shows discharge of 70,952 and so on, including volume of 22,000 at Jefferson street and 22,000 at Brandon's bridge. Table shows actual volumes that flowed through in years respectively shown opposite those volumes. Velocities are those which will result if proposed improvement is put through.

In trip I made in 1889 part of boat was always in water from Adams dam until I reached La Salle. Was obliged to get out at one point; struck at others and shoved off with oars. That was above head of Treat's Island where I got out. Went past island in left hand channel. Went down Desplaines at point where it enters into Kankakee, where dam in question is proposed to be located. Was badly scared there; did not turn over, but thought we would; water swift and waves high, and boat shipped much water going through high waves. Time of trip was July; began employment on first of June. In 1904 went in skiff from Joliet to La Salle. Put boat in water at Joliet, at McDonough Street Bridge. Went from there to Brandon's bridge in river itself. Passed Treat's Island and through channel at mouth of river. Do not think we struck bottom anywhere. Had to keep sharp lookout to keep boat from turning over in swift water. It was in spring; don't remember the month.

Referring to Exhibit No. 2, a list of bridges across Desplaines from Irving Park Boulevard to the mouth, appearing at transcript 2494 to 2496 (Abst., 1037, 39), Irving Park

Boulevard is a road that runs out from Chicago at south end of Graceland Cemetery.

5398 Distance is given in my table of distances from mouth to each bridge; that would be 55 miles from mouth of river. Point where Illinois-Michigan Canal and Sanitary District canal come close to Desplaines for first time after leaving Chicago is 45 miles from the mouth. If question can be interpreted as referring to Summit, that would be only 40 miles from the mouth. From the map, know where old portage road was, or portage slough, where it came into Desplaines.

5399 Dam No. 1 is above Jackson street bridge, 15.3 miles from the mouth. So if Dam No. 1 were inserted on the table it would come between Jackson street bridge, which is No. 9 on the list, and Ruby street bridge, which is No. 10 on the list. So that all bridges or obstructions in the Desplaines between dam No. 1 at Joliet and the mouth, are the aqueduct piers, Smith's Bridge, Treat's Island Bridge, or Millsdale Bridge, Brandon's Bridge, and five bridges in Joliet. Remaining 44 enumerated in list lie above dam No. 1 at Joliet. In 14-foot waterway project, it was not designed to use the Sanitary District channel from Chicago to dam No. 1 at Joliet.

5400 The part of the Desplaines river to be used was from Ruby street to the Sanitary District power house at Lockport. There was no extension of the Sanitary District channel from Lockport to dam No. 1 at that time; there is no extension there now with 14 feet in it.

Q. How deep is it from Lockport to dam No. 1?

Objection; incompetent, irrelevant and immaterial.

A. That would vary according to the volume of water. Do not know what average depth would be.

If the Sanitary District channel were used from Chicago to Lockport, and the extension of the channel from Lockport to dam No. 1 at Joliet, the bridges and other obstructions I have enumerated as lying above dam No. 1 at Joliet, would have no bearing on the question as to whether there was a navigable waterway between Chicago and the mouth of the river. The table does not relate to that. The 5401 heading is "Existing bridges across Desplaines river."

To compute velocities at points mentioned in table on page 41, so far as those points are in the Desplaines river, as they were in years mentioned in table, would be a voluminous

computation; have not data nor time to do it at present; nor between now and tomorrow morning. If one man could do things like that in an evening, would not need 140 men working for him on a job as I have had.

5402 With map before me, as close as I can give it at present time, crest of proposed spillway was about 19 feet above low water of 1883, or 16 feet above low water of 1901. The crest of spillway is 77.0 feet Hennepin datum. Hennepin datum is 435 above Memphis datum. If I have data with me will figure out and give low water elevations and crest of spillway according to Chicago, Hennepin and Memphis datums.

5403 The notation near mouth of Desplaines Woermann Exhibit 1, which says: "Proposed Dam of the Economy Light & Power Company," the dam as there drawn projects some little distance beyond southern bank. Dam has never been built across stream so as to stop flow. Plan says "Proposed." Water of Desplaines was continued

5404 to pass in a restricted channel on southern side of cofferdam, so far as Economy Company's works are concerned. I said river was about 250 to 300 feet wide at its mouth; that is not built across the narrowest point. Not correct that it is 180 feet wide at point where dam is proposed to be erected and between 250 and 300 feet wide at mouth. These widths are natural low water widths; river not now natural condition. Width at present time where dam is proposed to be erected is 250 to 300 feet; probably at point where dam is to go 275 feet; a little narrower above, a little wider below.

5405 Q. You would not call the proposed dam at the mouth of the Desplaines river an obstruction to navigation, would you?

Objection; incompetent, immaterial and irrelevant and not cross-examination.

COUNSEL FOR COMPLAINANT. Let record show he has produced this map showing the obstruction.

COUNSEL FOR DEFENDANT. It says on the map "Proposed."

The WITNESS. Title says nothing about obstructions. It says: "Map of Desplaines river from Lockport to the mouth based upon the government surveys of 1867, 1889 and 1899." I put on the map several additional data, to show various obstructions that have been and now are in the Desplaines.

Where they are no longer in existence dates are given. Explanation further amplified in my direct.

5406 Assuming that there is navigation, the proposed dam of the Economy Company is not an obstruction to navigation, because it is not carried along far enough. The cofferdam is a partial obstruction. It was put in by defendant in this case.

My authority for labeling Beard's dam 1833, was the testimony in the State case. Think I took it from testimony when I drew map. Beard's dam was erected for power purposes. Remains were still there before we erected our cofferdam, that is, one end on the south side.

5407 Have one reference to date of Beard Dam; the testimony of Jeremiah Collins, abstract p. 1052, record, 3433, State case says: "I know Johnny Beard. He built a dam and sawmill about 1836 or 1837." With longer search can find other references. Do not know when dam was removed. Was out when I went down in 1889. Without looking up date I am unable to say when abandoned aqueduct of Kankakee feeder was constructed. All that remains in river today are abandoned piers. Do not think it was taken off; it fell off and was washed off. Portions were there when I went down in 1889; no portions are there today. Distance between piers fifty feet. A boat 49 feet wide could hardly get down through there. One 45 feet wide could, 5409 if they put a line out to hold themselves back or backed water as they went down. If there is sufficient water there is no obstruction of passage of boat today, provided it is sufficiently narrow to allow it to get through piers without striking.

The next obstruction shown on map is Smith's Bridge, 5410 a traveled bridge. It is just above mouth of DuPage river. The river is narrowed at point where bridge crosses it, by abutments. Bridge there in 1889; that is as far as personal knowledge goes.

The Millsdale or Treat's Island bridge which goes from Treat's Island to south bank of Desplaines is a traveled bridge. Not there in 1889; been built since.

5411 Smith's bridge consists of one 60-foot and two 90-foot spans. On the two channels there is a very small island between the 60-foot span and the 90-foot span. At low water bottom is dry under 60-foot span. There are rapids under 90-foot spans. Water not deep. As to whether

the river above and below Smith's bridge is not much wider than 240 feet, will say it is not. Width does not cause rapids there. River is wider above bridge than at bridge. Do not know width just above bridge; would estimate it at 250 5412 or 300 feet. The bridge is 240 feet. That takes into account width of piers. Spans practically come together over piers. Lengths I give are lengths of steel trusses. River is somewhat wider above bridge; I do not know how much. At high water distance from water to bottom of bridge is very little. At that time bridge is isolated; water runs over both approaches. There is probably 12 or 13 feet clearance when the water is four feet deep.

5413 The two bridges at Treat's Island are known as Millsdale bridge; were built at the same time across two channels. Bridge over north channel about a quarter of mile from the south channel, which is left hand channel going down river. Each channel means left hand channel going down. There is a clearance of about 11 or 12 feet under Millsdale bridge when depth of water is four feet. Only one span at Millsdale, 100 feet wide in the clear. That is the length of the span. Clear width between piers probably 95 feet.

My recollection is that the Millsdale and Smith bridges are both Pratt trusses; steel bridges.

5414 The dam known as Treat's dam, labeled on map as near Treat's Island, is across both channels. It was situated some distance down on the island across two branches of the north or east channel and went across the south channel. My authority for labeling it 1835 is testimony in State case. A portion of the ruins of that dam was there when I went down river in 1889; it obstructed flow of water on north side; I do not think it did in south channel. Do not know from personal knowledge that dam ever existed in south channel; never saw any remnant of it.

5415 Thomas Austin Mills, in his testimony at abstract 1030, State case, says: "The dam was near the upper end of the island. On the west channel was a little further down. The dam was about 80 rods above the mill on the east channel." He indicated it then on the map, Zarley Exhibit 1.

Referring to Lake Joliet on the map, below a point labeled "6 miles," I insert "R. R. Bridge," and the railroad extending about a quarter of an inch on either side of the lake, but not connecting with any of the railroad systems shown

on map. This bridge does not exist at this point at this time. It existed in 1889. In bad condition. There were 5416 never any piers there that I know of. It was a trestle bridge, part of which stood in 1889; did not extend across river. Could not tell you in detail at present time. Made no effort to charge my mind with that feature of it.

COUNSEL FOR DEFENDANT. Complainant's witness Stevens, at page 416 of abstract, State case, says: "The sawmill at Treat's Island was commenced in 1836 and finished in 1837.

The grist mill was built shortly afterwards."

5417 The WITNESS. The Benyaurd survey of 1883, I think, shows that bridge across Lake Joliet; it may be there was a pier; I am not certain.

I refer to the railroad bridge that counsel was just asking about. It is in Lake Joliet and Lake Joliet is about 250 feet wide at that point.

As to whether practically all that I say in 1889 was an abandoned suspension pier on that side, I would say I do not know what you mean by an abandoned suspension pier. I did not say it was a suspension bridge.

COUNSEL FOR DEFENDANT. He said it was a trestle bridge.

COUNSEL FOR GOVERNMENT. Well, there was none of the bridge itself left, was there?

5418 A. This trestle bridge was left partly extending over the lake. I would not say how far it extended.

As to whether I am able from what I saw in 1889 to tell as to whether the bridge as a matter of fact ever did extend over across the lake, would say the evidence was conclusive I think in that point; it would be pretty irrational to suppose that anybody built a bridge out part way from each bank and then failed to connect it in the center. I was told of the bridge having been used by the quarry people there.

Brandon's bridge was one 130 foot span and two 148 foot spans. The vertical clearance in a four foot water depth would be about eleven or twelve feet. Bridge was there in 1889. Do not know how long previous to that time.

McDonough street bridge is just at south portion of City of Joliet, half mile north of south boundary in the city 5419 limits. Do not know when it was erected; it was there in 1889. There were three 120 foot spans.

HOBART W. HARPER, a witness on behalf of defendant:

Direct Examination.

I live at Joliet; I am a professional photographer.
5420 Have been in business twenty-four years. I took pictures of Desplaines river in 1908; I have them here. They are the pictures in the hands of counsel for the United States. I took them on September 12, 1908, at various points between Lockport and Romeo. They faithfully represent portions of the river which they apparently represent on picture. The picture you now show me is looking up the river at a point where the river turns to the west.

5421 With reference to the river at the time the picture was taken, I stood as near the center of the bed of the stream as I could judge, looking north. That fairly represents the bed of the stream at the time that picture was taken. Cannot tell exactly at what part of the Desplaines river that picture was taken, or the exact distance from Lockport or Romeo, but it was on the way. We walked from Lockport controlling works to about that point from Romeo, and took views as we went along. I should judge that was about half way between Lockport and Romeo. The distance between the controlling works and Romeo is about four miles I think. By controlling works I mean controlling works of the Chicago Drainage District Sanitary canal.

(Which said photograph was offered in evidence and marked "Harper's Exhibit No. 1." For copy of said exhibit see Appendix, page)

Objection on the ground that the portion of stream to which it refers has not been identified.

5422 Photograph which has just been handed to me was taken looking south, down stream; I stood about center of river. It exactly represents the condition of the river at that point. Was taken on the same day as previous photograph between Lockport and Romeo. As near as I can remember that was about three miles north of the controlling works.

(Which said photograph was offered in evidence and marked "Harper's Exhibit No. 2." For copy of said exhibit see Appendix, page)

Same objection.

5423 Picture which counsel has now handed me was taken by me on the same day as the preceding; it was taken looking north, up stream, in the bed of the stream, and faithfully represents the condition of the river at the point where taken, which was about two miles from Lockport.

(Which said photograph was offered in evidence and marked "Harper's Exhibit No. 3." For copy of said exhibit see Appendix, page)

Same objection and objection to these photographs on ground incompetent, immaterial and irrelevant, and because they assume to represent Desplaines above entrance of Sanitary District channel in Desplaines; do not show Desplaines river in state of nature.

Cross-Examination.

5424 This Harper Exhibit 1 was taken about two miles above Lockport. I am figuring the points of distance from the controlling works of the Sanitary District. I did not measure the distance so that it is a mere guess or assumption on my part.

As to whether there is anything that I can identify these points more fully as to just where it occurred by certain land marks along the stream, farm houses or things of that character, I will say I might be able to by going over the ground, that is the only way I could identify it, by taking the pictures with me. This exhibit (Exhibit No. 1) represents the Desplaines at a point on the river.

5425 As to whether the channel of the river is represented as over on the right hand side of the picture where the water appears, I would say I stood about in the center of the channel, probably when I took it, when it came around. I was not standing myself in the bend of the river, I was standing at the straight part of the river, the bend was farther up north. I cannot say exactly how wide the river bed was at the point where I took the picture. As to whether it was two hundred or three hundred feet, or a hundred feet. I should judge about two hundred feet. My camera was facing directly up the stream at the time I took this picture. Exhibit No. 3 was taken about two miles from Lockport. Exhibit

No. 3 was taken about one mile from Exhibit No. 1.

5426 Harper Exhibit No. 1 was taken two miles from the controlling works, and Harper Exhibit No. 3 was taken three miles.

Q. I might have misunderstood you, but I understood you to say that Harper Exhibit No. 1 was taken two miles and Harper Exhibit No. 2 was taken three miles, and Harper Exhibit No. 3 was taken two miles from the controlling works. Is that correct?

A. Well, I have kind of got mixed on the pictures. Now, Exhibit No. 3, which one is Exhibit 3.

Q. This one here (indicating).

A. I won't say exactly but it is between two and three miles from Lockport, I did not measure the distances at all when I took the photographs. I cannot say how far the pictures were taken apart from each other, I do not remember.

As to whether No. 3 was taken between Nos. 1 and 2, would say, yes. Wait a minute; No. 3 was taken nearer Romeo.

Q. No. 3 was taken nearer Romeo.

A. That is 2, is it not (indicating).

Q. Yes, that is No. 2.

A. That was taken nearer Romeo. That is about the last one I took as I went up toward Romeo.

5427 I cannot tell how far No. 3 was taken above No. 1.

Harper Exhibit No. 3 is not taken from near the bank, it is taken in midstream. As to whether this bush (indicating) is on the bank, I would say that is not the bank there, the bank is further over. It is a bush in the middle of the stream or near the middle. As to whether the channel is here shown way over on the extreme left, I would say it is on the bend, I took that on a bend of the river channel. On the extreme left of the picture there appears water. There were pools of water there. This is a pool of water (indicating). This was looking to the south—no, let me see, that is looking to the north. I cannot say exactly how wide the river bed is at this point, I should judge about two hundred feet. I cannot tell exactly how far No. 3 was taken above No. 2. As to whether there were any particular land marks by which I could identify, I would say nothing in particular. This picture No. 2 is looking to the south. These pictures are far enough apart so that No. 2 and No. 3 do not coincide.

5428 They are far enough apart so that there is nothing in either picture that shows anything on the individual ones. No. 2 and No. 3 face towards each other. In No. 3 I am facing north and in No. 2 I am facing south. The river bed at this point is about the same in both pictures. This bush which appears on the left hand of the picture does not represent the river bank. There appears to be considerable water

lower down in this picture. Pools of water. There is no running water there. There appears to be a channel there. There appears to be a channel over on the left hand side but it isn't. I stood as near the center of the channel as I could figure. I know that the channel is not always in the center of the river. It may be nearer one bank or the other but I was speaking of the distance from the banks. When I speak

of the center I mean the center of the river bed rather
5429 than of the channel. In this Exhibit No. 2 there appears a gentleman, who is Mr. C. A. Munroe. No other gentleman accompanied me on this trip. As to whether Mr. Munroe or myself selected the points at which I was to take these pictures, I would say Mr. Munroe did. He asked my suggestions as to the best points sometimes. My opinion was consulted in that respect as I remember it. I cannot give the conversation at this point where this picture was taken, as to why I took it at this particular point or why I stood at this particular position. We evidently had some conversation but I don't remember what it was. Mr. Munroe usually selected the points where I should place my camera in order to get the picture. I did take other pictures on this trip besides these three.

Q. Have you got any of those pictures here?

A. No, sir, I have not.

Mr. SCOTT. I have. Do you want them?

COUNSEL FOR GOVERNMENT. We do not care.

COUNSEL FOR DEFENDANT. You called for them, and I
5430 will give them to you now. Just note that I hand to counsel for the government two more pictures.

Q. Did you take any other pictures besides these additional two that have been handed me by counsel for the defendant?

A. No, sir.

COUNSEL FOR GOVERNMENT. Did I understand from counsel for the defendant that they are going to offer these in evidence?

COUNSEL FOR DEFENDANT. I offer them to counsel for the United States to do with them as he sees fit.

The WITNESS. My business is that if a professional photographer. I am located in Joliet, Illinois. I am in business for myself. As to whether I could go to the points at which these photographs were taken today and ascertain the same points, I would say I could with the help of the photographs, if I had the pictures with me, that is the only way I could do

it. I am not familiar with this territory where these pictures were taken. Not, at all.

As to whether I personally know as to whether or not this is the bed of the Desplaines river, I would say I know it is. I had not been there prior to the taking of these pictures.

5431 As to whether I was told by Mr. Munroe that this represented the bed of the Desplaines river, would say I knew it was the Desplaines river by being in that vicinity but I never went up the river on a trip fishing or anything of that kind, so that I could know any other way, aside from going with him. As to whether I made any examination of the surrounding country to see whether there was another bed of the river near there, would say I only made the examination that I could see as we walked along.

Re-direct Examination.

I live at Joliet on the Desplaines. We went on a street car to Lockport. Found the Desplaines up there. We went to the controlling works of the Sanitary District on foot. From there we went up the original stream, the same stream I live on at Joliet and found at Lockport. There was no continuous stream in the river at any point in the river I passed from Romeo on that day.

5432 Q. Referring to these pictures 1, 2 and 3, which has been offered in evidence, I would like to ask you what the condition of the river as you saw it that day at other points than represented by these pictures was so far as water was concerned?

Objection; incompetent, immaterial and irrelevant.

A. There was very little at any other point.

In my opinion those pictures were typical of the general condition of the stream between these points. The two photographs that were handed to counsel for United States are the two remaining photographs I referred to, taken at points between Lockport and Romeo on Desplaines, on the same day.

5433 (Which said additional photographs were offered in evidence and marked respectively "Harper Exhibit No. 4" and "Harper Exhibit No. 5." For copy of said exhibits see Appendix, pages)

Whereupon counsel for defendant called the attention of the witness to a map entitled "Map of the Illinois and Desplaines Rivers from Chicago, Illinois, to the mouth of the

Illinois River, in fourteen sheets, including an index map, sheet No. 12," and so forth, from House Document No. 263.

The WITNESS: I can point out on this map the river whose bed is shown in these pictures. There is the word "Romeo." The stream is over there. I am pointing to the stream west of the Chicago and Santa Fe Railroad track, and it was on that side of the stream that the river bed was found which I went up, and that which I have pointed out as the stream I went up is the stream marked Desplaines river on this map.

5434

Re-cross Examination.

Cannot indicate upon that map the point at which we took these photographs. About one-third of the way between the controlling works and Romeo, there are a number of islands shown as being in the river. Do not remember whether these photographs were taken among those islands. Could not tell whether they all were taken above or below these islands. I remember I saw some islands. Made no examination to see whether there was another stream bed further over to the east or west than one in which I took these photographs.

5435 Cannot tell the exact point where Exhibit 4 was taken, nor give any idea as to that. That is taken where the stream divides and passes each side of an island, two ways. It is looking down stream, down and across, not exactly directly across the stream, but diagonally. It shows quite a stretch of water about center of picture, extending all the way across the center. Those bushes are little islands. This is the bend of one bank—well, let's see: looking down stream, that would be the right bank; and this is one of the islands. The stream passes both ways there. When I say "this" in the first place, I am speaking of the right hand side of the picture, and when I say "this" in the second place

5436 I speak of the left hand side of the picture. This picture represents a branch of the Desplaines river. It is the same case here, there is an island and there are two streams. One passes on the other side. That is the embankment of the drainage canal (indicating), and there is a stream passes to the right side of these bushes. That is also another island (indicating). That is the left bank looking north. I am speaking now of the left hand side of the picture.

I made an examination of this other channel on the other side of the island. The condition over there was identical

with this shown in the picture. The channel on the other side is about the same in size. Do not recall making further examination to west to determine whether there was any channel further west. It was about 100 feet across 5437 there. The river or the channel or the bed of the river runs sort of zigzag through there. It has the appearance of being narrow there, while it is not.

Objection to Harper's Exhibits Nos. 4 and 5, incompetent, immaterial and irrelevant.

5438 J. W. WOERMANN, witness on behalf of defendant:

Cross-Examination (Continued).

The clearance at the McDonough street bridge is about 22 feet when the depth is 4 feet.

5439 The Adams or Malcolm dam is not there at the present time, but my authority for labeling it 1839 is testimony in state case. My authority for figures 1898 with reference to that dam is, I think, testimony in state case. I knew it was about that from personal knowledge. Dam was there in 1889 when I went down river. It was in 1867. It is shown on the 1867 Wilson profile which I introduced, my enlargement of it.

5440 My answer in the direct examination covers the point in regard to Adams dam, transcript 2504 (Abst., 1042) which says: "Q. Mr. Woermann, does the government profile of 1867, to which you have referred, show any obstructions in the Desplaines river? A. The profile shows it does. Q. What? A. It shows Adams' dam and Beard's dam, but does not show the Kankakee feeder aqueduct, and the Brandons road bridge, which I have added from the information on the Wilson map which accompanied this profile."

5441 Have not examined Wright's report of 1843. Do not know that General Wright states in that report that there are no obstructions in Desplaines below Dam No. 2. If that were a fact, then my date of 1898 would not be erroneous. I know that date is practically correct from personal knowledge. In 1889 we had to put our skiff into the river below the dam on account of its being there. I do not know that that dam was built between 1878 and 1880 instead of 1839. Was probably rebuilt at that time. Do not think the original dam was built then.

The Jefferson street bridge was there in 1889. Consists of one 78-foot and two 114-foot spans.

The C. R. I. & P. railroad bridge is the next bridge instead of the Jefferson bridge.

The clearance on the Jefferson street bridge is about 23 feet when the depth is four feet.

The C. R. I. & P. railroad bridge runs obliquely across the stream. The spans along the line of the railroad, are, one 153-foot; four 88-foot; one 65-foot. Distances between piers at right angles to the channel are much less. Have not those distances. Should say the river is about 250 feet wide at that point. Clearance is about 18 feet when the depth is 4 feet. Should remark that these clearances I have given are all approximate. Have not the elevation of the bottom of the trusses; only of the floor, and have had to estimate in each case what the thickness of the bridge floor system was.

Passing the Jefferson street bridge, the next above is Dam No. 2, labeled 1841 to 1899 on the testimony in the state case. I know there was a dam there in 1880; that it was removed at the time the Sanitary District enlarged river at that point.

Q. Is Dam No. 2 owned and controlled by a private corporation?

Objection; incompetent, immaterial and irrelevant.

A. It was built in connection with the Illinois and Michigan canal, by the canal authorities.

5544 The next dam, which is labeled Cass Street dam, bears the date 1833 to 1841. My authority for those dates is the testimony in the state case, that is my only knowledge of the matter. I am not able immediately to refer to the particular testimony in the state case. Whereupon counsel for the government made the following request:

I will ask you in all these cases where you have referred to the testimony of the state case to furnish me before the close of this cross-examination with the exact portion of the record in the state case which you referred to.

The WITNESS. I never saw this Cass Street dam. The next is the Cass Street bridge. I do not know when that was constructed, it was there in 1889, and is still there—a regularly traveled bridge. It consists of one 90 foot and one 214 foot span. The clearance is about 18 feet when the depth is four feet.

5445 The next obstruction is Dam No. 1, labeled 1846; constructed by the Illinois-Michigan canal authorities.

The next obstruction, however, was the Jackson street bridge, which was there in 1889. Is regularly traveled. Consists of two 62-foot, two 88-foot and one 89-foot span. Clearance about seventeen feet when depth is 4 feet. When I say depth is four feet I mean depth in the present channel as it has been deepened by the Sanitary District. There is a little more than four feet of water there in that channel now, through Joliet. The water in the channel through Joliet was about 5 feet in 1901, which is the flow line I platted

5446 on my profile that accompanied document No. 263, and represents the low water of 1901. Dam No. 1 is situated practically at the Jackson street bridge, only a few feet above the bridge. The map I have referred to is dated May, 1908. Sanitary District channel was opened in 1900; of course, not completed. Are still spending much money. Was completed in sense that water was turned in in 1900, and flowing through controlling works into Desplaines and Lockport. Have not shown Sanitary District channel on this map.

In 1908, there had been removed the Cass street dam, Dam No. 2, 'Adams' or Malcolm's dam, the railroad
5447 bridge which crossed Lake Joliet, Beard's dam, Treat's dam, and the aqueduct piers stood abandoned and alone with no connection between them. Prior to 1841 Dam No. 2 did not exist; after 1841 Cass street dam did not exist.

The map does not correctly depict the Desplaines and the obstructions in it from mouth to Lockport as it appeared at any one time in its history.

Q. This map was introduced at the request of defendant to show every obstructions that may have existed in Desplaines at various times and places, and does not truly portray conditions of Desplaines as it existed at any particular time in its history; that is correct, is it not?

Objection, map speaks for itself; shows on its face
5448 when obstructions were built and when removed, and therefore conditions at particular times.

A. Would say that it shows the principal obstructions; would not say that it shows every obstruction at all times.

I don't know what obstructions there ever were in the Desplaines not shown on the map. There are many boulders not shown.

I have before me Woermann's Exhibit No. 3, which 5449 was made under my direction by W. F. Millar. He was a draughtsman who was employed by me at that time. He was not in the service of the United States at that time. His business was that of draughtsman. As to whether he was in the employ of some one else or was in business for himself, I would say I have just stated that he was employed by me. He did not have any other employment except my employment. I do not know how old a man he was.

Q. How much experience did he have as draughtsman?

A. Sufficient to do the work that I had him do.

COUNSEL FOR GOVERNMENT. I submit, Mr. Woermann, that that is not a direct answer to my question. I move to strike that out and I ask you if you can answer that a little more thoroughly. That is not an impertinent question.

A. I cannot tell you.

Q. Don't you know anything about his qualifications as a draughtsman?

A. I certainly did. I did not have to ask him his history, however, to find it out.

Whereupon counsel for the government moved to strike out the answer as not responsive to the question.

5450 Q. Tell us what you know as to his qualifications.

A. I know that he had been doing draughting before. I cannot recall the name of the firm he worked for. And I knew that he was able to do draughting of this kind, and I employed him to do certain work for me. Should say he was between 25 and 30 years old. Had not worked for me previous to this time. Know of his having been employed previously in draughting work. Checked over Millar's work very carefully; I scaled the critical depths. I mean the least depths on the Wilson profile, on the original tracing, and then scaled them as he had platted them. If there were any discrepancies I had them corrected. I perhaps scaled

5451 eight or ten and compared the rest of it by inspection.

I made what a draughtsman would call a precise check from beginning to end. This map I introduced in evidence is by Paul Burgoldt; it is a tracing from Millar's profile, made by Paul Burgoldt, who was a draughtsman employed by the Mississippi River Commission. I did not assist any commission. The Mississippi River Commission was a United States commission. Burgoldt was not in the United States engineer's office except in a broad sense. The office of U. S.

engineer was in Federal building; that of commission in Liggett building, separate buildings.

5452 Potter is not a member of the Mississippi River Commission. Am uncertain whether the mouths of all the tributaries were shown on Millar's tracing or not. As I stated in the direct, these were not shown on the original Wilson profile, but were added by me for convenience in reference. Same is true of the Kankakee Feeder aqueduct. Do not remember as to whether these were all on the Millar profile.

The remark I just made should include Brandon Road Bridge. Those are all dotted to distinguish them from heavy line depicting the low water surface, and solid lines showing bottom of river. Beard's dam is drawn in solid because that is shown on the original Wilson profile. Same is true of Adams' Dam.

5453 Supplemental to my answer, would state, the mouths of these tributaries were shown on profile made by Mr. Millar, and I think only addition is Brandon Road Bridge, which is not shown on one made by Millar. The scale is different in this profile than in one of 1867. The tracing by Burgold is a copy of a map by the Board and on a different scale from the original, and having been carefully done, I see no reason why it should not have the same standing for accuracy among engineers that a copy would have made upon the same scale as original profile. I compared the critical depths with those I scaled from the original tracing. Recall no bench marks left by Wilson survey. Recall having seen no note books prepared in connection with it. Don't know whether Wilson profile of 1867 was ever officially published by United States. The United States is not in habit of publishing those profiles and maps any more than it did the maps and profiles I prepared in 1902 and 1905.

5454 In connection with House Document No. 263, the maps were photolithographed. The profiles were not photolithographed. United States not in habit of making photolithographs of important profiles and maps prepared in connection with various surveys. We have them on a small

scale of the Marshall survey at Treat's island. I have 5455 no doubt that the profile of 1867 was filed in the engineer's office in Washington; would be incomplete report if not accompanied by profile. Never heard of that being done in 20 years' government service. Do not know whether it is there or whether it should be there. It is customary where engineers make official profiles of reports to send them

on to the chief of engineers. This profile was found in office of the United States Engineer, Chicago; was not an accidental discovery. Was indexed, and title speaks for itself.

5456 It is referred to in the government reports; the report of

December 17, 1867. Profile in the U. S. Engineer's office at Chicago which I call Wilson profile, is a tracing. The original drawings from which these tracings are made are not in the United States Engineer's office at Chicago, to the best of my knowledge. With complainant's counsel, I searched for

that profile in U. S. Engineer's office, Chicago. Did not 5457 expect to find it there; think original in Washington with report. At time survey was made engineer's office under which work was done was located at Davenport. In transferring records profile may have been lost.

5458 Fall at the mouth of Desplaines is about one foot in a thousand. Points on profile I take to get this declivity are about 2,000 feet apart. One at Beard's dam, other about 2,000 feet below; of a few hundred feet above the mouth. In 1867 river was about 180 feet wide at narrowest point. I state depth on that profile of river at mouth was .4 of a foot.

I do not know what would be the average depth of the stream crosswise. As to whether it would be less than .4 of a foot, if that was the greatest depth, I would reply, yes. As to whether assuming that the depth was $\frac{2}{3}$ of that amount, or $\frac{3}{4}$, that would give you about .3 of a foot as the average depth, I would say it would. Taking the declivity as I have given it and the width as I have given it of 180 feet, and an average depth of .3 of a foot through the cross-section, as to what would be the mean velocity of a quantity of water 5459 flowing through there, such as Mr. Wilson describes; a thousand feet per minute, I would say the maximum velocity would be about .7 of a foot per second, and the average velocity about .4 of a foot per second. Whereupon the following stipulation was made between the respective counsel:

(It being desired to supplement or enlarge stipulation heretofore made in reference to the testimony introduced on the state case, it is agreed that counsel for either party may introduce in evidence any statute or other published documents, by giving notice not later than September 15, 1911, of intention so to do, with reference to such statutes or other public documents intended to be used; subject to any objection as to the competency, materiality or relevancy of such statutes or public documents.)

As to what would be the velocity assuming a flow of a thousand feet, would say I did not use that figure of a thousand feet in my assumption.

5460 The discharge given those figures with a mean velocity of .4 of a foot, would be about 21 feet per second, taking the assumption that the average depth is .3 of a foot and the width 180 feet. I took the declivity at 5 feet per mile, which is about one foot in a thousand.

The measurement of depth at Treat's island is .8 of a foot in the left hand channel. Left hand channel going down is the right hand channel. Left hand channel is deeper. The Wilson profile of 1867 using the right hand channel does not represent line of deepest water. Do not know the depth in the left hand channel in 1867.

5461 In the rapids below Joliet the shallowest points were .5 and .6 of a foot; the declivity at that point being about 4-1/2 feet per mile according to Wilson profile.

To determine declivity I take in two points on those rapids. Wilson profile has drawn it as a straight line, from Adams' dam to head of Lake Joliet; very nearly three miles. Two miles and three-quarters, perhaps, would be more accurate. The width through there at those shallow points is quite variable. As to what is the width at the shallow points, which I have given as .5 and .6 of a foot, would say that in each case where you say "is" do you mean "was," so far as it was at the time shown by Wilson?

5462 COUNSEL FOR GOVERNMENT. I mean in 1867, yes, sir. The river is very much broken up by islands at those places, but the combined widths, that is adding together the widths on each side of any island, only runs from 350 to 400 feet. The average velocity is about .5 of a foot per second. I would be unable to say what the discharge would be. As to whether I can calculate it, given the velocity, the width and depth and the slope, I would say I have not got the depth. As to whether I did not give that as .5 and .6 of a foot, would say I did at that one point depicted by the profile.

Q. Take it at that point.

A. As I stated a few moments ago the river is very much broken up by islands and I do not know what the average depths for the total cross-section would be. The way I would compute it would be to assume the discharge was the same as it was at the mouth, and work backwards.

5463 Where the river was spread out over such a wide area as it was there, the water running between boulders and

all broken up, a poor guess at the average depth would be probably less than half the depth of .5 or .6. On the assumption that the width is 350 feet and the average depth .25 of a foot, the discharge would amount to 44-1/2 cubic feet per second, which is evidently an error, so that the assumptions are evidently in error. It is about double the amount I figure at the mouth. The assumption is evidently in error, according to statement of Wilson's report, which states discharge to be 1,000 cubic feet per minute, or 16-2/3 feet per second.

5464 Regard calculations I made at mouth of river more reliable than those just made as to rapids below Joliet. Wilson's map or profile both show Beard's dam, so was probably in existence in 1867.

Referring to stretch through rapids below Joliet, from dam No. 2 down to Lake Joliet, the Wilson profile shows a uniform declivity for entire distance. I am familiar with the slopes and rapids below Lake Joliet. Where a slope as represented in the profile does not vary for nearly three miles, would say it was not accurate to as great a degree as one in which the elevation of water surface had been determined at more frequent intervals.

5465 This profile shows on the Desplaines river between Adam's dam and the mouth of the river, nine intervals, counting one below mouth of Kankakee. Am speaking of my copy of Wilson profile, the low water line of which is an exact copy of the one on Wilson profile. Wilson profile shows uniform slope from head to foot of Treat's Island.

The next level across pool at foot of Treat's Island. Next slope at mouth of Du Page river. The next level lake DuPage; the declivity through Lake DuPage being shown as about two feet. There is no such declivity shown on any 5466 later profiles of Lake DuPage.

Referring to my testimony at transcript 2526 (Abst., 1048), which reads (reading): "Q. How much?" "A. 13,000 cubic feet per minute." "Q. Yes." "A. Deducting from that the 2,800 feet per minute which according to the evidence in the Druley case was required for navigation below Dam No. 2, leaving 10,200 cubic feet in the river below Dam No. 2, or 170 cubic feet per second. Then by proportion, taking the area of the watershed above Riverside as 633 square miles," and so forth.

One hundred and seventy cubic feet per second represents the amount that would flow down the Desplaines from Dam No. 2 to its mouth, according to that computation. No other

canals lead from Desplaines river which would take water out of Desplaines river below Dam No. 2. 170 cubic feet per second flowed down river to its mouth. This 13,000 cubic feet per minute was the amount pumped into the Illinois Michigan Canal. The water flowing in the river would probably be very little more than the water coming from the Illinois and Michigan Canal. As to whether there was any additional water, or in other words as to whether the water flowing in the river would be greater than the water coming from the Illinois and Michigan Canal, will say probably very little if any at that time. As to what became of the water in the Desplaines river itself, would say there probably was not enough to speak 5467 of at that time. Hickory creek contributed very little if any additional water above this 170 cubic feet per second. Rock Run would not contribute enough to measure, I should say. The DuPage certainly did not; they kept the water in the DuPage up in the canal; I imagine the cows drank every bit that came down Jackson Creek in 1867 and all those other creeks.

5468 The Kankakee cut-off does not contribute water to the Desplaines except when Kankakee is high and Desplaines low.

Ordinarily it is flat, dead water. It is not always higher at the Kankakee end of the Kankakee cut-off than at the Desplaines end. Testimony of people who lived in that vicinity, is that water runs sometimes in one direction and sometimes the other, depending on height of rivers. I presume it is only in time of flood that the water of the Desplaines river flows into the Kankakee through the cut-off. Basis 5469 of my computation of 13,000 cubic feet per minute, is the amount alleged to have been pumped into canal by table of Ossian Guthrie which I refer to; so that in computing the actual water in Desplaines below Dam No. 2, I have to add whatever natural water if any that flowed into Desplaines in order to make an accurate computation. If there was, there would be more than 10,200 cubic feet flowing in river below Dam No. 2.

Q. How do you reconcile this statement of Wilson's, that there was a thousand cubic feet per minute discharged in the Desplaines; and your own computation which showed 10,200 cubic feet per minute, without taking into account the amount of water poured into the Desplaines river below Dam No. 2 by these various other streams?

A. Wilson profile shows surface of water at time his sur-

vey parties determined water surfaces; which had nothing whatever to do with lowest discharged measurements he secured. His profile does not fix that low water discharge at 1,000 cubic feet per minute, nor does he anywhere say so. His statement that the discharge of the Desplaines was 1,000 cubic feet per minute would not be error. The profile, on assumptions which may or may not be true, by my calculation shows 1,200 cubic feet at the mouth of the river and about 2,500 cubic feet at Joliet. I am unable to say the liability to error to extreme variations from those assumptions. Do not know whether it would vary 1,000 feet or 10,000.

5471 (It is agreed between counsel that testimony of Daniel W. Mead as given on pages 3797 to 3808 in the record of the case of *The People ex rel. v. The Economy Light & Power Company*, in the Supreme Court of Illinois, No. 6242, shall be inserted here as though given upon this hearing, the matter referred to relating to the qualifications of the witness.)

DANIEL W. MEAD, witness on behalf of the defendant.

Direct Examination.

Am 46 years old; occupation civil engineer; at present residing in Madison, Wisconsin. Have an office in First National Bank Building, Chicago. Graduated from department
5472 civil engineering at Cornell University June, 1884. 1884 and 1885 was topographer in United States Geographical Survey, working in the Chippewa Valley, Wisconsin; went there after flood in 1884, to study conditions along river, make maps and reconnoissance survey of river, flood
5473 planes and the glacial terraces. Succeeding winter and spring of 1885, until middle of year, engaged in making maps and report to Professor T. C. Chamberlain, in charge of glacial division of U. S. geological survey. Late in 1885 appointed city engineer, Rockford, Illinois, then my home, and remained there two years. Designed sewerage system for city. 1887 one of organizers of Rockford Construction Company, that made a specialty of building municipal public works. Was engineer and manager of company until 1896. Previous to that had done some work in general practice of civil engineer. From 1896 to present time have been in practice in general lines of engineering, principally on hydraulic

work. First experience on water power work in 1886; 5474 retained by Rockford Water Power Company to study question of flowage above their dam. Designed a new dam and constructed a portion of it across Rock river for members of that company. Constructed hydraulic power plant for Rockford Edison Company, of 1,500 horse power; plant has not been constructed up to date. Acted as engineer at Sterling for Sterling Hydraulic Company in study of probable effect of Hennepin canal feeder on water power at that place, report of which I published some years ago. Designed and built plant of Sterling Hydraulic Company. Made study of probable back water flowage from government dam, done at request of Captain Riche, of U. S. engineers, being a question of compensation for effects of Hennepin Canal. Designed and built various dams, among them dam at Batavia, on Fox river, a concrete dam at Danville on Vermillion river; small dam at Muscoda; wooden timber dam at New Albany, Indiana, and am now building at Kilbourne, Wisconsin, being en- 5475 gineer for Southern Wisconsin Power Company; constructing power plant costing million and a quarter to develop, and at present 12,500 horse power, with future extension to about 18,000. Have made reports on good many plants, water power plants.

Am now designing plant for Northern Hydro-Electric Company at Green Bay, to be built on Peshtigo river in north-eastern Wisconsin. Spending nearly a million dollars there, to take up power to Green Bay from Fox up as far as Neenah and Menasha. Made report on water power project in Little Wolf River, Wisconsin; expect to construct this season, building two water power plants developing 5,000 horse power to be transmitted to Oshkosh. Have reported on water power at Constantine, Three Rivers, Lansing, White River, Michigan, power at Fremont, Ohio, and others I do not 5476 recall. Make reports on hydraulic matters for bond dealers in Chicago, among them N. W. Harris & Company, Royal Trust Company, Devitt, Tremble & Company, Trowbridge & Niver Company, John Ruvin & Company, and am engaged by Pittsburg Trust Company, of Pittsburgh, Pennsylvania, to report on water power at Atlanta, Georgia, near Lincoln. I built water supply systems at Rockford and Fort Worth, Texas. Have been connected with good many cities of the states in water supply, among them Joliet, LaSalle, Rock Island, Moline, Springfield, Decatur, Danville, Lawrenceville, and a dozen or so others, among them Ft. Wayne, Terre

Haute, Winchester, Ligonier, Indiana, Waterloo and Fort Dodge, Richland Center and Green Bay, and a number of water supplies for private individuals of some magnitude.

5477 Built two plants for water supplies for Schlitz Brewing Company. Just installed two six million gallon pumping engines to pump water for condensing purposes. For Pabst Brewing Company, installed number of deep wells and centrifugal pumps to raise water, capacity of three million and a half a day for washing purposes.

Incidental to bond work have done some levee work. Designed and built levees of the Meredosia drainage district below Albany, Illinois, on Mississippi river. Examined a number of drainage districts for bond dealers. Two years ago prepared plans for Sumas Development Company
5478 in British Columbia, along Fraser river. Expect to spend about three-quarters of a million there; am consulting engineer. In that development we expect to change the course of the Chilliwack river, which flows at present through the district of Lake Sumas, for about four miles. The river is of considerable size; has a flow of about a thousand second feet, and a high water flow of about sixty thousand second feet. The drainage is not very different from the Desplaines, except that the Chilliwack comes from the mountains and is fed by glaciers in the snow fields, and has very high floods and continuous flow. Its storm floods would be three or four times that of Desplaines; its low water is a thousand second feet.

5479 The Fraser river is a very large river, much like the Mississippi. It flows over a territory of 35,000 acres that we expect to reclaim. The Chilliwack flows into Lake Sumas, a lake of about 12,000 acres, that we expect to drain. To do this we are obliged to divert the Chilliwack directly into the Fraser, and we carry it across from its present bed across the district between levees, earth levees. We have a bank, a new bed there that will be about four miles in length; we are constructing a channel that will carry the low water flow across the district. The high water flow calls for two earth embankments about 700 feet across and 18 feet in height. The fall is considerable, and to eliminate high
5480 velocities are putting three dams across the river. We will carry a velocity of about three feet per second, controlled by taking the fall out by dams. We have dikes

along Fraser river, and large pumps to handle another branch of Sumas creek.

Am chief engineer of the Economy Light & Power Company, have designed the works that are or were under course of construction near Dresden Heights. Made the report for the people who bought the bonds, and at their request was appointed chief engineer by the company. Have acted as appraiser in a good many waterworks cases, among them the Omaha Water Works, the appraisal involving over six million dollars. At that time we had to examine over a million dollars worth of improvements to shore protection along 5481 Missouri river at Florence. Have been chairman of the Board of Appraisal at Appleton, Wisconsin, and Baraboo, Wisconsin; Traverse City, Michigan; Forest, Illinois, and Pittsburg, Kansas; appraisals having taken over water works by municipality. At present am representing a half dozen water companies for Wisconsin Railroad Commission, who are making appraisals for purchasing plants by the cities, and other cases establishing rates.

Have been professor of hydraulic and sanitary engineering at University of Wisconsin since 1904; just completing fourth year. Never taught before went there. Went there for opportunities offered to continue outside practice, and do research work.

Q. What was the attraction as to research work at the Wisconsin University?

5482 A. Great many formulae hydraulic engineers are obliged to use are more or less approximate. To determine actual value of constants and actual truth of formula, very large amount of work is necessary, based on actual determination or experiments. Have designed and built laboratory for University since then; have number men engaged under my direction in studies of that character. Laboratory is considerably larger than most other equipment of universities in country in operation. Opportunities for work of considerable size better. Ordinary laboratory has been on rather small scale. Determinations made were little uncertain, account small apparatus. We built laboratory large enough to experiment on work of considerable size. Recently 5483 published bulletin on flow through four-foot orifice. Up to present time no information available on flow through such large aperture. Are carrying on various experiments with turbines, centrifugal pumps, water hammers, flow of

weirs, flow through pipes, matters of that sort, to which the attention laboratory engineers has been attracted, for which sufficiently exact data has not been available. Have published three bulletins; large number more in preparation. Have written number of papers on hydraulic subjects; some fifteen years ago, number on hydro-geology, one on water supply and power, or water supplies and resources of Illinois; one on hydro-geology of upper Mississippi valley. Have published small book on hydrology, covering fundamental principles of hydraulic engineering that is used as text book at University of Wisconsin. Have published early part, about third, of book on water power engineering; which will appear in its entirety in July. Am same Mead who testified in case of *The People ex rel. v. The Economy Light & Power Company* in Circuit Court, Cook County, in 1908. Since then have been engaged in lecturing at University Wisconsin; practicing my profession as consulting engineer, entirely on hydraulic work. At that particular time had just begun construction of hydro-electric plant at Kilbourne, on Wisconsin river. Has since been completed; is in operation. Is plant for generation of electrical power by hydraulic means at Kilbourne, transmits power to Milwaukee, gives capacity of 10,000 horse power under head of from 17 to 20 feet. Designed that work. Superintended construction. Built some of it by day labor of which had personal charge. Also completed plant on Peshtigo river with capacity of five 1,000 kilowatt units under head of 75 to 85 feet, transmitting power 65 miles to Green Bay. Have made numerous reports on hydraulic projects. Since that time have designed and am just beginning construction of 16,000 kilowatt plant on Wisconsin river at Prairie du Sac. Power will be transmitted to Milwaukee and Madison and surrounding country. Engaged at present in constructing plant at Twin Falls on Menominee river near Iron Mountain; will have capacity of five 1,000 kilowatt units. Since that time have rebuilt waterworks at Decatur and am now engaged in reconstruction of waterworks at Quincy. Both cases are city supply. One in hands of private company. Decatur plant owned by city. Also redesigned and built new electric light plant for Decatur. Have done a very large amount of other minor works. Those are the principal ones. Made various surveys and reports. I mention Flambeau River, Chippewa River and Little Wolf. At present making surveys for power on Wolf River.

All those surveys made with view to power. Am engaged at present in investigation of large water power partially in Pennsylvania and partly in West Virginia; power in ultimate development probably will exceed 100,000 horse power. Investigated and made preliminary plans since for 50,000 horse power plant on Columbia river at Priest Rapids in Central Washington. Also investigated several powers in neighborhood of Boise, Idaho; one on Snake river, between Oregon and Idaho. Also investigated number of irrigation projects since, some in Washington; one in Utah. Recently reported on water proposition on Spokane river about nine miles east of Spokane. Think have been in British Columbia since then; investigated several water powers in Washington; one north of Seattle. When I say investigation, it usually includes both field investigation and investigation of hydraulic resources by examination of records; of plans where have been made; if not, preparation preliminary plans to learn physical and financial feasibility of project, usually in relation to practical development; whether it will pay to develop. Most investigations made for financial interests. Have had occasion to consider effect of deforestation upon flow of streams. Regimen of stream is important factor in power projects that I have investigated or constructed; is one of vital features of proposition. Examined effect of deforestation upon streams for two reasons; one is bearing of water supply upon power. Other is question raised by various financial interests whether could expect their investments to be permanent; whether deforestation or other changes, drainage of swamps, etc., would or not have serious effect on regularity and quantity of flow, so to determine whether investments might be considered permanent or if would be seriously influenced by change in regimen brought on by changes on water shed.

Desirability of reforestation has been considered by me in that connection; is question that has been raised particularly in Wisconsin regarding reforestation of head waters. Tax has been proposed for reforestation on grounds flow of streams would be very greatly benefited and water power owners would be directly benefited and could be taxed for purpose reforestation. Have written upon subject of deforestation upon stream flow; and on other subjects connected with stream flow; as early as 1892 or 1893 to date; sev-

5489 eral pamphlets and reports. Have produced recent work on subject. Recently published bulletin of University of Wisconsin, on flow of streams and factors modifying it with special reference to Wisconsin conditions. Have volume in hand in which it appears. Publication is Bulletin 425, University of Wisconsin, Engineering Series, Volume 6, No. 5. In specific cases have arrived at conclusions as to effect of deforestation on stream flow; perhaps not as general proposition, which is very broad question. Have arrived at conclusions as to such effect in streams similar to Desplaines river in general way.

Objection as to it pertaining to anything but Desplaines river.

5490 In general way am familiar with physical characteristics of Desplaines river. Have known it great many years.

Have opinion as to effect of deforestation upon streams of that character.

Same objection, on ground no proper foundation been laid for question and not sufficient evidence as to similarity of conditions.

The WITNESS (continuing): Think deforestation of Desplaines river, if such deforestation is large factor, would tend to increase run-off slightly and to slight extent decrease its regularity. As to how the regimen of low water stage would be affected, would say I believe flow would be maintained for a little longer period if a stream was well forested than if it was totally deforested. Do not think extremes of either low or high water would be materially modified. Do not believe would be very material modification between total forestation and total deforestation
5491 on Desplaines river, assuming it was in one case entirely covered with forests and in other case was practically deforested; as it is, occupied by farms and homes and habitable as we find it now. Think under those conditions difference would not be very material. Think would get little more water with deforestation; little greater regularity with forestation.

Objection extends to all this testimony on ground no foundation is shown and no qualifications.

The WITNESS (continuing): Will explain use of country by farms and dwellings as to effect. The cutting off of forests

in this part of country been usually followed by use of
5492 the lands for farming purposes. In forested condition
proportion of rainfall actually reaching ground is considerably reduced. French experiments show average of about 25 per cent. less rainfall under a forest than in the open fields; that is, about 25 per cent. is received on leaves of trees and evaporated without reaching the ground, thus reducing quantity of rain that would reach ground and that could afford a source of run-off. On other hand, evaporation under the trees is reduced; that is water in soil or water on surface of soil and in ponds surrounded by forests is less of it lost by evaporation on account of trees, and prevention of circulation of air. Trees as rule use less water for actual consumption from their roots than various farm products; less than grass lands and grain. Taking into account amount evaporated from leaves and quantity consumed by the trees for maintenance there is, as a rule, a larger proportion of rain
water, I believe, consumed in the forest than in open.
5493 That is the reason I say think as general rule cutting off of forests will increase total annual amount of flow of the stream. Other conditions following deforestation and settlement are draining of lands and cultivation of lands. Draining of lands affects various river systems in various ways. Great many of the inter-morainic depressions—I mean country inside terminal moraine have sink holes caused by presence of ice, affording effective drainage. They are places with no outlet until water has risen considerable distance, and drainage system of all this inter-morainic country is not developed. Geologically speaking, has only been short time since glacial period; and we find many of these sink holes and pot holes in Desplaines valley; refer to larger bowl shaped areas of slight depression that in great extent will make swamps,—as general proposition they retain certain amount of water that gets out very slowly, most of it evaporating, and their presence on a drainage area means large loss by evaporation. As drained out they tend to increase discharge of stream and cultivation going along with them, and under
5494 drainage opening ground to entrance of moisture, makes ground water more accessible to rainfall; tendency of both those conditions, drainage and cultivation, is to reduce evaporation somewhat and to steady the stream. In number of cases it has been observed that extensive cultivation has apparently increased low water conditions of stream. Think

I have in general way answered question. Questions of water supply and other matters that sort have been introduced but would have slight effect. Doubt if additional waters secured from artesian wells and find their way ultimately into streams would have any more effect than forests. Have no familiarity with conditions existing in state of nature between south branch of Chicago river and Desplaines as to swamp sometimes called Mud Lake or Portage Lake existing there.

Q. Assume that there did exist a swamp of considerable extent between Desplaines river and south branch of Chicago river that had disappeared through inhabitation, drainage and cultivation. Have you an opinion whether or not doing away with that swamp by means indicated would in any way affect low water conditions of Desplaines river?

Objection on ground hypothesis not sufficiently definite as to extent of swamps and other details, to be of value in case.

A. That would depend somewhat upon nature and extent of swamp. I judge that the question gives certain information that swamp was readily drained and therefore not very deep, or had no very great depth, therefore no great retaining capacity. Swamp of that general nature that can be readily drained and cultivated is apt to be source considerable loss to flow of stream, furnishing large evaporating area; and while swamp of that kind would be apt to reduce flood flow slightly, doubt if it would add to low water flow of the stream. Drainage and cultivation ground where swamp was, in my judgment, would afford better means of regulation of low water condition than swamp itself.

5496 Have read part of Professor Cooley's testimony on subject we are now considering. Think have no comments to make upon it. Cannot agree with his conclusions. Do not think possible from any information which I am acquainted with, and I have examined literature on subject at considerable length,—that it would be possible on any drainage area to make calculation showing quantity, even approximately, that would be added to or taken from stream by either reforestation or deforestation. Believe only way that could be exactly determined would be by long term of records. There are a number of points I might mention where Mr. Cooley and I do not agree. I cannot agree that it was the general opinion of engineers that deforestation affects stream flows to any large measure. There is a popular super-

stitution that is exceedingly common to that effect but it is not based upon a careful examination of the question.

As far as I know the earliest opinion that I saw expressed was the paper by Wex on the Danube, published a good many years ago, and translated by one of the members of the United States Engineers Corps. Wex discussed the flow of the Danube in regard to the gauge heights, and as I recall it at this time—it is some time since I read it—but, as I recall it at this time his discussion is entirely without a parallel discussion of variations in rainfall that always occur, to which changes in gauge heights can always be directly attributed. Since then there have been various articles that have appeared on both sides of question. Usually have been based upon opinion and superficial observation rather than on exact data. Usually been written with view of defending and maintaining preconceived notion rather than to determine truth of the matter. Think in number of cases Mr. Cooley and I agree that forests have a certain modifying effect upon the flow of water across land; they hold back minor flows; water will not reach river as rapidly with a forest as without if flow is comparatively small in quantity. When flow increases I doubt if forests have any material effect, that is, in excessive heavy rain storms after smaller rains are over, heavier rains pass through to the ground, the forest bed is saturated and it is usually a comparatively thin bed and water runs away practically as freely with as without bed. One of the main features is fact that when you take storage on a watershed, you see water there, you know its source, how it is retained, you see the lake filling and the water flowing from it in less volume because of less height due to spreading out of lake. Take ground waters in sands and gravels on many of our streams; which is not a theoretical source of supply, because many municipalities are taking water supply from lakes and pumping their supply from ground storage; but I never had occasion and know of no engineer who ever had occasion to go to a forest bed to find water. You can find water after rain in forest bed, but it is small in quantity and comparatively soon disappears, held back somewhat by lack of evaporation. Surface supplies outside of forests evaporate earlier because of increase in evaporation outside, but when you look for this storehouse of water that is said to exist in forest bed, I have never been able to find it. Never have seen it; have

looked over great many watersheds and into that proposition. Modifying effect of forest is there, but is one of minor influence; doubt if would be very material on any watershed. On some am satisfied has no influence whatever. Were many matters covered by Mr. Cooley; took no note particularly of them; do not know as could discuss them without taking a note of them. Read his testimony for the first time since came to-day; glanced through it hastily. Have and have not had occasion to make observations on streams before and after deforestation. Never made personal observations on a stream before and after, but had occasion to investigate observations made for long term years during which deforestation took place, and to study and try to determine what effect resulted from deforestation and other changes on the water

shed. Results of those studies enter into conclusions
5500 I have given here. Have studied upper Mississippi above Hastings for 37 years, about; about 35. The Wisconsin above Portage for about 37 years; Wolf River above New London about 27 or 28 years, during which deforestation took place on drainage areas of those streams; but was unable to discover that deforestation, amounting to in some cases about 33½ per cent., had influence to increase or decrease high water or low water, or the mean condition of flow. Observations made on those rivers are applicable to Desplaines only in a general way. They necessarily bring with them a basis of comparison for streams more or less similar, the condition of streams locate under similar conditions of temperature, rainfall and geological conditions. No two streams are exactly alike; hence cannot carry comparisons out to ultimate limit, but they afford basis of judgment; which I have endeavored to and did apply to Desplaines river.

5501 Q. Can state whether precipitation has decreased or increased materially throughout this general locality during the period of which we have records?

Objection; records are best evidence.

A. I have made careful study of that subject within last year, not only of upper and central Mississippi Valley, Ohio Valley, New England, Southeast and extreme West, and while finding very great variations occurring more or less in irregular cycles I have found no evidence of any increase or decrease in general average of precipitation at any of these points. They increase for a considerable period and decrease

for a considerable period, but do not recall one instance where condition of rainfall at present is any less or greater than at periods in past; or anything to lead me to think that there is any material change in the rainfall.

Cross-Examination by Mr. Cressy.

5502 As to what investigations I have made in reference to the conditions of forestation on the Desplaines river, will say I have made no investigations in regard to that. My only knowledge as to that is from the evidence that has been given here. My principal knowledge of the Desplaines, with which I have been familiar for a good while, has been taken from one of Cooley's Reports which was published sometime in the eighties. I have a copy of it and read it a number of times some years ago. Not lately. Have, of course, been familiar with the Desplaines at various points, but have never been over it in detail. I know its general conditions as I know those of many other streams. Do not know that I could name any particular points at which I am familiar with the general conditions of the Desplaines river. I have passed over the Desplaines; lived out here at Austin and have been out on the Desplaines which is west of there, and of
5503 course passed over it on the railroad. As to whether I take into consideration the condition of the subsoil of the river bed in considering the effect of the forestation or deforestation, would say I think it would have its bearing. As to whether it would make a difference whether it was a permeable subsoil or an impermeable subsoil, as to the effect of deforestation, would say that it would undoubtedly have a larger relative effect upon a stream with an impermeable subsoil, such as the Desplaines river, than it would on a stream that had a very permeable subsoil. I think perhaps I would have to modify that to this extent, that the conditions in regard to those soils would have to be taken into consideration, as to whether even though permeable, they could give back the water to the stream itself, or not, but under similar conditions I think that it would have a little larger relative effect in regulating the stream where the subsoil was impermeable than it would with a permeable subsoil. As to whether in the hypothetical question put to me about the drainage of this swamp area, it would make any difference as to whether that swamp area was drained into the Desplaines

river or whether it was drained into some other water system, would say if it was drained into some other water system, of course, it would be gone, whatever drainage there was there would be gone from the water of the Desplaines.

5504 It would make a difference to that extent, and the effect of that swamp area in a state of nature would depend on whether it drained into the Desplaines system or into another system. Being asked to suppose it to have drained into the Desplaines, and that the Desplaines river basin had been deforested, and being asked if I would say that those two elements would have any effect upon the run off of the stream and the maintenance of the mean, or low water volume, would say those two points would be entirely separate, I should judge. Of course, the withdrawal of a portion of the area would withdraw the waters that would naturally flow from it, and would have an effect to that extent. I am not familiar enough with the swamp condition to be able to know whether it would materially modify the low water flow, or not. What its geological condition was, or what its nature was, whether it was impervious or whether its drainage might develop sand and other materials of that sort. I know that the

Desplaines river basin is essentially or very largely an
5505 impervious subsoil. Of course, in that particular case, the removal of a certain portion of the area would affect the mean water to some extent. But, I do not see with its impervious nature, how it would affect the low water flow, because I know from the gaugings which have been made there for a great many years, that it is little or nothing. As to the deforestation part of the question, in answering I can simply repeat what I have said in regard to that, that I think the effect of the deforestation would be to cause the low water conditions to appear slightly earlier than it would if the land were forested, but I do not think that it would make any material difference as to the extreme of low water or the extreme of high water. It might, in other words, modify the regimen of the river slightly. The extent and character

5506 of the swamp would modify the regimen of the streams according to their physical conditions. As to whether in order to properly state what would be the effect of deforestation, it would be necessary in each particular case to investigate what was the extent of the swamp area, would say, if that was a very large item, I should think so, but not the minor conditions that, as I understand them, occur on the

Desplaines. I do not understand that there has ever been any very extensive swamp areas on the Desplaines river, at least, I am not familiar with any location where they have been extensive. As to whether if it was a fact that I was in error in that assumption, and that there was a considerable swamp control, that part of the swamp control had been drained into the Chicago river and part of that swamp control had been devastated by means of a canal being cut through a section of the country where the swamp control formerly existed, my opinion would be modified as to the effect of deforestation upon a watershed like the Desplaines, will say I do not see any reason for modification. Of course the extensive swamp systems, such as we have in many places in Wisconsin, are not forested, most of them. Of course we have our tamarack swamps that are forested. For instance, such as those on the Upper Rock River. Some of those swamp areas are without trees so that those areas when they are drained may or may not have an effect, according to the conditions under which they existed and the new conditions brought forth by the drainage; but as a general proposition they are entirely distinct from the forest effects, which are in another portion of the drainage area. So, I do not quite catch the relation that should be modified on account of the presence of the swamp, and that is my modification in the forest conditions. As to whether a swamp has the general effect like a pond or lake, to retard the flow of water, will say to maintain the regimen of the stream to an extent, yes, depending somewhat on the character of the swamp. Of course the whole tendency of a swamp or low place, a lake or any other condition of that sort, is to catch the rainfall and to store it, and on account of the fact that the rise is not very great the run off from the swamp area is comparatively slow and the result is a decrease in the flood heights, if you had a swamp area as a general proposition, a prolongation to the flow of the stream, to an extent. There is this point that has to be considered in addition, that the swamps are usually full of rushes and grass and matters of that sort, that the evaporation is exceedingly heavy, heavier from a swamp area as a general rule, I believe, than from the area of a pure surface of water. That is to say, that there is a greater exposure due to vegetation and due also to the shallow depths of the swamp. The result is when the swamp is drained out, that if it is simply a ques-

tion of drainage and there is no cultivation, I think you would be apt to get a more immediate discharge of water. When cultivation begins, I think that you are then restoring in a better way the storage capacity, perhaps not to the same extent, but to an extent that will certainly affect the low water advantageously; that is to say, a ground storage is the best possible means of increasing the low water flow; that is, on the average it is not affected, because it gets into the ground and it flows slowly to the stream, supplies water to the stream,

and therefore maintains the low water better, because it cannot be lost, as the water from the swamp is lost by evaporation. As to whether my answer would be the same with reference to the ordinary flow of the stream as distinguished from the low water flow, I do not know but what I would ask to have my answer read over again to see whether it would apply. It was applying my answer partially to the low water. I think I have rather dragged that answer into several conditions of water. Of course, the ordinary flow after a rainfall would be held back by a swamp and delivered a little more slowly than it would for instance, from a tributary, perhaps. As to whether after a flood or high water, the volume of the water would be continued longer at given stages with the water shed where there was swamp control, than where there was no swamp control, let me see if this will not answer the question; that any surface control, such as a lake or a swamp or a forest, taking the limited extent of the control of forests into account, the result of any of those surface controls is to regulate the stream, but to decrease the total amount of water that reaches
5510 the stream; in other words when you store water on the surface, be it in a lake or in a swamp, the evaporation is heavy and the total quantity of flow water is less and the regularity of the stream is increased. That, I think, is quite apparent if you take the flow, for instance, of the Great Lakes, into account. You get a flow of about 36 per cent. of the rainfall, as I recall it, whereas in some of our Wisconsin streams we get as high as 65 per cent. of the rainfall flowing away in the streams. The forests have a slight regulating effect upon the run off, the swamps have a much larger regulating effect, and lakes a still larger effect as a general rule. Of course conditions may vary so that statement might not strictly apply, but that is the general condition of controls of that sort. As to whether I assume as a

fact the truthfulness of the French experiment which assumes that only 75 per cent. of the total rainfall reaches the ground in forested regions, will say I know it is true, but I do not know its extent from any personal experience. I have stood many days during a rainfall under a tree and known that none of the rain came through, and that is a
5511 common experience that you can vouch for as readily as I can, and I know that that went up in evaporation. Now, I never measured it, but the French experimenters did, and those experiments were considered so reliable that they were given in Bulletin No. 7 of the Forestry Reports, and I assume that they are, therefore, accurate. As to whether in making these answers to various questions put to me on direct and cross, I have assumed that only 75 per cent. of the rainfall reaches the ground in the forested regions, would say, no, I would not make that assumption. I assume that there is a considerable loss, I know in some instances it is much smaller than that, and in other instances it is probably larger, for the French experiments were in some particular cases as low as 10 per cent. loss, while in others they were as high as 40 per cent.; it would depend somewhat on the kind of trees. As to whether it would depend somewhat as to the season of the year also, of course those were experiments that lasted during a considerable period, I understand. What
5512 per cent. of the rainfall would be retained by trees and evaporated by them before it reaches the ground, would depend very much upon the season of the year. As to whether it would be fair to say that the general effect of deforestation is to shorten the period of high water and lengthen the period of low water the extent to which the high water is shortened or the low water lengthened, being dependent upon the conditions of the particular water shed, would say, yes, with the understanding that in any event the change was very slight. I do not think it would ever have a very great effect. As to just what effect it has, which is in some dispute among engineers, is very largely a question of degree. As to whether counsel understood me correctly in understanding that I said that I agreed with Mr. Cooley in the assumption that the forest consumed less water than the open country, would say yes, if you confined consumption entirely to the amount that is taken up by the root; if you take into account the amount that is lost in evaporation from the leaves as well, I think it

is greater than even the grass lands or grain. I think
5513 it is essentially correct that the amount that goes into
plant life in the forests is less than the amount that
goes into growing grain or grass.

Re-direct Examination by Mr. Scott.

Austin is in the Thirty-fifth ward of the City of Chicago,
east of the Desplaines about five or six miles, I think, I
5514 do not recall exactly. I lived in Austin some five or
six years. I have spoken of being familiar with the
gauge readings that have been kept for many years on the
Desplaines river. I meant the Riverside gauge readings.
Being asked if the swamp which was assumed in certain of
the questions is below that gauge, whether the drainage of
the swamp would have any significance as to those gauge
readings, will say if the outlet of the swamp was below, it
would have no effect whatever.

Q. Suppose that the swamp area in the watershed under
consideration was less than one per cent. of the entire water
shed, would the draining of that swamp away have any material
effect on the stream below?

Objection; hypothetical question founded on hypothesis
not justified by the evidence.

A. It would not.

Re-Cross Examination by Mr. Cressy.

I am not familiar with the conditions of the Desplaines
river in Lake County, Illinois, as to the swamp control
5515 that existed there in a state of nature. As to whether I
am familiar with the ridges that surround the Des-
plaines watershed, especially its upper portion, so as to know
whether that ridge may not consist of a little series of knobs
with pot holes, and so on, would say, no, I am not familiar
with the upper portion of the Desplaines. As to whether
the conditions of the swamps and the pot holes between the
knobs on the ledge would have some effect upon the question
of the regimen of the stream and the effect of the draining
of such areas, would say the condition of the swamps, their
extent and character, would have more or less effect undoubtedly,
on the relative run off. The conclusions which I have
given in evidence as to the general effect of deforestation are
the same as I have given in my printed publications.

5516 J. W. WOERMANN:

Cross-Examination.

On the blueprint from the Kiefer profile of 1867, the Adam's Dam is at point where rapids are shown to begin. It is not labeled "Adams dam"; recognized it by position with reference to head of Lake Joliet, being about two and 5517 three-quarters miles above that point. Dam Number 2 would be further up stream. Elevation of Adams dam is 92 Hennepin datum, as shown on my other profile of 1883, Exhibit No. 5.

59.682 appearing on Wilson profile signifies a datum plane 6 feet below lowest water of Lake Michigan, which would be approximately 65.682 minues Chicago datum.

5518 As compared with Chicago datum, Hennepin datum varies from 151.5 to 152.5 according to what level lines are compared. That would be 85.8 Hennepin datum. Wilson profile shows foot of dam; you asked me what crest of dam was. Foot of dam about 85.8 according to my profile. The point marked head of Lake Joliet, where I have 71.682 represents water surface at that point; does not represent bottom. 59.682 does not represent crest of dam rather than foot.

5519 Figuring out and drawing a right triangle shows difference of about 12 feet. Judge that misunderstanding of that profile arises from fact that the position at Adams dam does not come in the proper position with reference to locks of Illinois and Michigan canal. That is due to fact 5520 that two profiles, separate profiles, are platted on one sheet, length of river and length of canal not being the same. When get number of miles from common origin, cannot compare object on one with object on other.

As to whether Adams dam is not in proper position with reference to these locks, said dam is part of river profile, not of canal profile. Therefore cannot compare position of that dam with reference to position of locks. Adams dam 5521 not part of canal. Therefore is not and should not be shown thereon. It would come below the guard lock, which was opposite dam number 2. Little further to right of guard lock on this profile, if you move river profile down so Adams dam comes to that point, at other end of profile

would have junction of canal and river at La Salle separated by same amount that they are here, because that is common origin from which profiles are platted.

Dam No. 2 is in Desplaines river, but being part of canal system is platted in profile of canal.

Believe lock number 5 corresponds with dam number 1.

5522 The common point I refer to from which these were platted was where canal and river joined at La Salle.

Am familiar with profile at mouth of river where it indicates "Old Dam," meaning Beard's Dam.

Lock No. 6 and lock No. 7 are at end of Channahon level in village of Channahon. Lock No. 6 is lift lock, not guard lock.

5523 On profile of Illinois-Michigan canal, words "Kankakee River" are about eighth of an inch apart from words "Mouth of Kankakee River," on profile of river. Mouth of Kankakee not shown on canal profile. Words "Kankakee River" printed thereon; mouth itself not shown; words merely general designation.

5524 Words "Old Dam" correctly represents Beard's Dam with reference to lock number 7. Canal and river far apart at this point. Depends how you compare them, whether you run at right angles to canal or to river or some other way. When two things get miles apart, it is indefinite to say one is opposite to the other. Don't think profile shows where objects on one are with reference to objects on other. That was not in mind when they were prepared, because they are not opposite. Beard's dam indicated on profile of river by white knob on bottom of river bed, and the surface of the water is represented by a line. Unnecessary to examine original profile to ascertain whether top of little white knob projecting from bottom is coincident with line representing water surface, or whether there is not
5525 slight space between top of dam and surface of water.

This profile is blue print from tracing, which counsel for complainant has had made.

Q. I think the profile is indistinct upon this one point and that is my purpose in putting the question.

The WITNESS (continuing): The line which I have taken as indicating the Adams' dam is the line showing the upper end of the river profile.

As to whether there is no white line at the bottom where this profile ends extending from the bottom of the river to the surface of the river as is the case at the point "Old

dam" that counsel has called my attention to, would say there is a line here. The line does not begin at the river bottom and there is no line between the water surface and the river bottom. That is the line representing the 5526 water surface, or the surface of the water as it comes over the dam. Somebody has drawn a line in pencil at this point marked "Old dam" extending up from the bed of the river nearly to the surface of the water, but there was no line on the original.

COUNSEL FOR GOVERNMENT. You misunderstand the point altogether, Mr. Woermann, I am not referring to the pencil line which appears on here, I am referring to the white line which extends from the bottom of the river up. Do you see that white line extending from the bottom of the river? Is it not a fact that at the line you have taken as indicating Adams' dam, there is no mark whatever extending from the bottom of the river up to the surface of the water?

A. There is a vertical line. He simply does not continue the profile from the bottom of the stream. He stops at the foot of the dam. The white line represents the bottom 5527 of the river. I do not think there is any line extending from the bottom of the river to the surface of the water for the reason that he does not attempt to show Adams' dam, he stopped at the foot of the dam. Dam No. 2 and dam No. 1 are not on there either. My survey of 1902 to 1905 shows soundings at the mouth of the Desplaines river upon the maps. I also give the soundings in the rapids below the City of Joliet. Have seen and used Benyaurd, Marshall and Barlow surveys; in each case they depict line of proposed improvement. Those lines made to follow lines of deepest water as far as could be done without introducing serious curves or abrupt turns in line. Proposed improvement line was mean or compromise on line of deepest waters. Pre- 5528 sume in regard to Wilson profile and others they did not follow line of deepest water or thalweg. For profile of 1867 more was done than mere running of line of levels to fix up levels of stream. A survey that did not take soundings in river would be a travesty.

5529 Have heard of Preston's survey of 1857. Nothing in 1867 report to justify assumption that it merely took profile of Preston and ran a line of levels; tenor of whole report negatives such assumption. Do not think profile of river, which we have examined was inaccurate.

Whereupon counsel for the government called to the witness' attention slope in Lake Dupage of two feet and mentioned that later reports all show that the slope in Lake Dupage was something like .6 of a foot and inquired if there had been a survey made there whether the witness would think they would have determined a slope through Lake

Dupage more accurately than they did, to which the witness 5530 replied, "My own explanation of that particular thing would be that it was a mistake of the draughtsman in drawing in that water line; and I admit that on that point the profile is probably in error. I do not know what there was in the river at that time. There may have been some conditions there that we are not familiar with which justify them in drawing it that way.

As to whether on my own survey and own profile I show the water surface there, whereas on the Wilson profile of 1867 the water surface is shown as one continuous slope for a distance of three miles, would say, as I stated this morning that is a question of degree of accuracy. It indicates that they did not take water surface elevations at frequent intervals. I would not say it was a mistake. As to whether I would not say it was inaccurate on the basis of my own survey, and as to whether I, myself, showed the water surface and the way it sloped at the various points, would say that it is true. To assume for the purpose of the question that it is either seven or nine different slopes in the whole 16 miles from Joliet 5531 to the mouth of the Desplaines river, as to whether I would consider that rather a hasty piece of work in showing only that number of slopes in that distance, considering the character of the Desplaines river, will admit that for a perfect depicting of the profile more points should have been determined. As to whether I have not any personal knowledge that there were any more soundings taken than at these nine points, would say I am satisfied in my own mind that there were but I am unable at the moment to refer you to any reference.

COUNSEL FOR GOVERNMENT. I have the report here if you care to examine it. If you think it appears in the report I will be very glad to let you see it. It does not, as a matter of fact, appear in the report that they made any other soundings?

A. Which would not prove that they were not taken, even if it did not show, for the report is necessarily a very brief statement.

Q. Just answer my question, Mr. Woermann, will you please?

A. I do not think I stated in my report that I had one party or two parties making soundings at certain points.

(Motion to strike out answer as not responsive and question reread.)

5532 I do not know. As to whether it appears from the profile that they made any soundings at all, I will say, yes. It says "Levelled by H. G. Paulfrey and H. E. Worrall; drawn by G. A. Kiefer."

As to whether it does not show that there was any survey at all made, would say, reasoning on that basis, you could say there was not any transit line run, and yet the map shows the location of every transit station. As to why the profile does not state the authority if it was surveyed, would say, it does. It says merely "Levelled" but the title is of the character which usually appears on a profile. The profile has to do only with elevations, it does not mean that nothing except levelling was done on that survey.

Whereupon counsel for complainant introduced excerpt from report of 1867, passage on page 442 (reading):

5533 "The Desplaines river rises in the State of Wisconsin and runs nearly due south, parallel with the lake shore, and generally not more than eight or ten miles from it, until it reaches a point about thirteen miles in a southwest direction from the mouth of Chicago river. Here is a slight depression, a mile or more in width, extending across from the Desplaines to the south branch of Chicago river, through which a part of the waters of the former river, in time of floods, flow into the lake. In this depression is what was once known as Portage Lake (so designated on the old maps of the country), but now better known as Mud Lake, a succession of shallow ponds on the same level connected with each other and with the Desplaines river, and extending about six miles towards Chicago river. This was the portage or carrying place between the waters of the lakes and the Mississippi made memorable by the early French voyageurs, and so well known to fur traders. But Portage or Mud Lake has ceased to exist, the shallow ponds having been drained, and the impassable swamps rendered valuable land."

(Reading, page 452):

“The liberal appropriation of lands by the United States, in 1827, to aid the State of Illinois in the construction of the canal from Lake Michigan to La Salle, and the subsequent expenditures of the State to accomplish the object, amounting to no less than \$6,500,000, were based upon the supposition that the Illinois, below La Salle, was a good navigable river, and this large expenditure for the construction of the present canal would secure a good and cheap navigation between Lake Michigan and the Mississippi. Such is not the fact. There has been scarcely a season since the canal was
5534 completed, 20 years ago, when there has not been a serious interruption to navigation, for a greater or less period, from low water in the river, and as the country has improved, so that the surface water which formerly drained more slowly and continuously into our rivers has ceased to afford any considerable supply in summer, the evil has been becoming worse. The past season the navigation between La Salle and Peoria was almost suspended from the last of June to the close of navigation, and below this it was but little better. In fact, navigation was virtually suspended on the river for all practical purposes for about five months.”

The WITNESS. Excerpts read show that at time survey was taken waters in Desplaines and Illinois were very low.
5535 My computation of 10,200 cubic feet per minute flowing below dam No. 2 in 1867, would not include any land water. I gave area of Desplaines watershed above head of Lake Joliet, including Hickory Creek, as 924 square miles; area of above Riverside about 633 square miles. I deduced from these areas volume of 116 second feet at Riverside, as corresponding to 170 second feet immediately below mouth of Hickory Creek and below dam No. 2. Do not mean right at foot of dam No. 2, but include Hickory Creek.

5536 In computing elevation of 12.1 at Riverside, for volume 116 second feet, base computation on Johnson's table in State case, which I know is substantially correct. Do not know as to whether it is used by Sanitary District. My authority for the statement that the depth on the bar below the Riverside Gauge with elevation 12.1 is .7 of a foot is that the gauge records for the Riverside Gauge year after year show that when the gauge got to 11.4 there was no

water going over the bar and there was nothing in the
5537 gauge records to indicate that that bar varied from
11 feet to 11.4. I examined the gauge records to determine that point very carefully. I said that the rainfall for 1867 was 30.2 and the average rainfall was 37.85 for the years between 1851 and 1895. This table which I took was made by Leveritt and appears in the report of Mr. Jacob Harmon. Mr. Leveritt states that his table is not a table of any one point in Illinois but represents the average of all the stations in the state together with some stations in adjacent states. On what I base my presumption that the average rainfall of the entire State of Illinois and adjacent states is more applicable to the Desplaines river basin than the rainfall
5538 record as taken at Chicago would say I do not recall making any statement as to which of the two tables would be preferable. I would answer now that the record for Chicago would be preferable. If Chicago record showed average precipitation from 1843 to 1910 or 33.99, and precipitation for 1867 was 22.41 inches, that would be better guide as to rainfall for Desplaines river in that year than record for entire state, but not as good as average of all stations in Desplaines watershed.

5539 Have produced no table for stations in Desplaines watershed, and don't know what stations there were there in 1867. Last annual summary of weather bureau for Illinois, shows stations in Desplaines watershed as follows: Antioch, LaGrange, Joliet, Yorkville, Aurora and St. Charles.

Last three just outside of watershed, but so close not
5540 more improper to include them in average for Desplaines watershed than to include Chicago, which is outside of watershed but should be included because so near. Harmon states ordinary dry river flow on Desplaines from Riverside was 13 cubic feet per second. I read from Harmon's report, page 134 (reading):

“Gaugings of the principal tributaries and of the Illinois river at Peoria were made during the low water in October, 1899, and represent approximately the average conditions of these streams during the late summer and early fall months. These gaugings were taken with a Price's current meter which had been previously rated
5541 by the United States Geological Survey. The beds of the stream were accurately cross sectioned and readings taken at the following stations:

Des Plaines river—At wagon bridge about 1 mile below C. B. & Q. R. R. bridge, near Riverside. Cross section was also taken at C. B. & Q. R. R. bridge for gaugings at higher stages of the river.

Flow 13.21 cu. ft. per sec.

Turbidity .04.

Dupage River—At wagon bridge about 5 miles above the Illinois & Michigan crossing, and about one-half mile below the C. B. & Q. R. R. bridge, which point is above the influence of slack water of the canal dam.

Flow 32.77 cu. ft. per sec.

Turbidity—Clear.

Kankakee River—At C. & A. R. R. bridge near Lorenzo, Ill. Rain for three days prior to gaugings and the river 2 or 3 inches higher than previous to rains, but still quite low.

Flow 509.24 cu. ft. per sec.

Turbidity .032.

Fox River—At wagon bridge at Welden about 8 miles above its mouth.

Flow 321.95 cu. ft. per sec.

Turbidity .019."

5542 Harmon does not give dry water flow of Desplaines
at its mouth in this table. At transcript 2533 (Abst.,
1050) I stated:

"This same report of the State Board of Health states that the low water flow when it is dry in the summer time, is frequently as low as four cubic feet."

Q. Where is that statement in Mr. Harmon?

5543 A. Paragraph on page 183 indicates that it is less
than four cubic feet. It says it goes entirely dry at
5544 that point nearly every fall. That is the only point I
referred to.

5545 I read that passage into the record (reading page
183):

"The flow of the Illinois river at Peoria is made up of the combined flow of the tributaries above, including the sewage from Chicago which reaches the Desplaines river at Joliet by way of the Illinois river and Michigan canal. The Desplaines river at Riverside, a few miles above Joliet, goes entirely dry at that point nearly every fall and for days and weeks at a time there is no appreciable flow. On the DuPage river

which enters the Desplaines a few miles above the junction of the Desplaines and the Kankakee, no data as to the low water flow is at hand, except the discharge measurement taken under my direction in October, 1899, which shows 32.77 cubic feet per second. This flow is greater than that found in the Desplaines on the previous day. The flow in the Desplaines at Riverside was 5546 13.21 cubic feet per second. The waters of the Dupage are added to the Desplaines before they reach the Illinois, so that the natural flow in the Desplaines, where it joins the Kankakee to form the Illinois, at the time of the gaugings referred to were taken would have been approximately 50 cubic feet per second, while the amount of sewage flowing through the Illinois and Michigan canal was 600 cubic feet per second. Practically all of the flow of the Desplaines river, as it reaches the Illinois, is, therefore, during dry weather, Chicago sewage."

5548 Referring to my testimony in reference to forestry conditions in Desplaines river, as to whether I included in the investigation which I made, that portion of watershed in Wisconsin, will say it was not included in making up the twenty-five per cent. Had it in mind and made statement in reference to that, that wooded portion increased somewhat towards north, and including Wisconsin area would 5549 probably increase that percentage a little. Wisconsin plats not available for study. 136 square miles of Desplaines watershed in Wisconsin, or about 21 per cent. of watershed is north of Riverside. Being asked if I stated the proportion of forest in that portion of the watershed north of Riverside to be about in the neighborhood of 25 per cent., will say 25 per cent. was my percentage for entire watershed; it would be less south and greater north of Riverside, possibly increasing further north. Do not know just what it would do in Wisconsin. Think conclusions drawn from Land Office plat for entire watershed substantially correct.

5550 Might not be true as to single section. Lakes, ponds and swamps as a rule included in forest areas. Area of ponds outside forest areas small. Cutting down forest, draining swamps, ponds, slough, and so forth, had little if any effect on flow of Desplaines; by the expression very little I

mean so small that there would be no means of determining percentage, if there is any.

5551 Am generally familiar with work of Illinois State Geological Survey. Have all their reports. Know H. Foster Bain, who was formerly director State Geological Survey. Never heard of his being professor at University of Illinois; he was located at Urbana. Have not read his article entitled "Stream Improvements and Land Reclamation Problems in Illinois, by H. Foster Bain." This article appears in the year book for 1907 of the State Geological Survey, Urbana, University of Illinois, 1908, and at page 57 of said volume, Bain states: "While there is no valid evidence that more rain is falling now than in earlier days, this hurrying of the water off the upland and into the valleys has produced congestion in the latter. Where once were clear open rivers with steady normal flow, suitable for navigation, there are now winding, brush-choked streams, with abnormal flood and low water stages."

Presume Bain made study of these conditions. His expressions would be entitled to weight among engineers and persons investigating stream flow. He is talking here about 5553 bottom lands, about Wayne County, and streams choked with brush, and so forth.

Upon request of counsel for complainant, witness read the paragraph immediately preceding that just read (reading):

"Ruining the rivers—It is an old and well established principle that water, usually so friendly and helpful, is none the less a natural enemy, and that each may protect himself and his land against its ravages as he will. Each land owner must accept and care for the water falling on his land or coming down on or across it in a natural stream channel. He may, however, in turn, send it on to his neighbor below and the neighbor must accept the consequences. Through all these years, not far now from a half century, our uplands have been drained by the simple process of hurrying the water on into the valleys."

5554 Don't know whether or not there is anything in State Geological reports respecting area of forests. As to whether where I refer to pot holes, I meant the large proportion of swamps and swales and sloughs that lie on the ridges and uplands among knolls and between depressions of the unmodified drift as left by glacials would answer, yes except

as to the words "large proportion." Cannot state what the proportion is; have made no investigation to determine. Some pot holes depicted on land maps, not all of them.

When I stated in substance that drainage of little basins increase run-off of streams, and that presence of forests diminish evaporation of such basins, I meant that when 5555 depressions are drained by ditches or tile water runs into river. In natural condition water evaporated, never reaching river. The effect of forests on those pools of water was to keep water longer in these pools than where they were in open exposed to sun. Large proportion of pot holes never drained into rivers, because of impervious nature of subsoil. What did drain reached river slowly to very small extent. Have seen water in pot holes at end of long dry summer where hole was not over a thousand feet from edge of 150-foot bluff. Don't think 5556 any water from that hole ever got into the river. Do not contend that there were not times when pot hole water level overflowed lip and down into brook connecting with the Desplaines. In all swamps and ponds in every water shed of an impervious character when water level is below lip of pool, only water reaching streams is that which seeps through.

5557 Believe portion of water that seeps through pot holes in Desplaines valley would be very small; may have been some. Did not measure extent of swamp land depicted in Desplaines river basin. Think that important as bearing on natural condition of Desplaines watershed as compared with present condition.

My attention is directed to Wilson and Gooding's report appearing in the report of the Chief of Engineers for 1868, page 452, which reads (reading):

"As the country has improved so that the surface water which drained more slowly and continuously into our rivers has ceased to afford any considerable supply in summer, the evil has been becoming worse."

5558 That tends to show that in the opinion of Wilson and Gooding that drainage of these swamp lands in Desplaines watershed had some effect on natural condition. Gooding was United States Civil Engineer, and chief engineer of the Illinois and Michigan Canal for about thirty-two years. Think he was familiar with Desplaines watershed from Chicago south. So far as I know standing of

Wilson and Gooding among engineers is good. Don't
5559 know where Laughton's Ford is; I have never made
a particular search or investigation to find out where
it was. I do not know sufficient about it to say that it was
on the Desplaines river below Riverside. It appears in Buck-
lin's letter in the Canal Commissioners' report of 1900 and
it there states that Laughton's Ford was eighteen miles above
Cache Island.

My attention being called to the question which was as to
whether or not Laughton's Ford was below Riverside and
having seen this letter of Bucklin will say that it would be
below Riverside in the neighborhood of Willow Springs. As
to whether in the various gaugings that were made of the
Desplaines and adjoining river systems, such as the Calumet
and the Fox and the tributaries of the Desplaines such as
in Dupage, these measurements were made to ascertain the
minimum flow there was in these rivers, I would say
5560 they were made to determine the low water volume, not
usually the minimum volume, however.

(Examination of the witness suspended for the purpose
of offering other evidence.)

COUNSEL FOR COMPLAINANT. Will not require defendant's
counsel to prove that the files presented are of the Chicago
Daily Tribune, Chicago Daily News and Chicago Times.

COUNSEL FOR DEFENDANT. I now offer excerpt from Chi-
cago Times, of Friday, February 15, 1889, page 3, left hand
column, headed "Enemies of the Bill," file had from the Chi-
cago Public Library.

Objection, incompetent, irrelevant and immaterial;
unsigned newspaper article; is report of conference of
certain men, several of whom are living and capable of
taking stand if testimony is material. Not the best evi-
dence.

(Reading):

5561 "Springfield, Illinois, February 14th. Enemies of the
bill.

The Chicago Drainage Scheme likely to Meet Some
Opposition in the House.

Joliet Dissatisfied by some amendments, by the spe-
cial amendment feature has some foes.

The morning debate in the House on the subject—the
anti-trust bill to be reported favorably.

Three hours were spent in a conference tonight be-

tween citizens of Chicago and Joliet in the effort to arrive at amendments to the Drainage Bill that would be satisfactory to both cities. There were present at this conference Mayor Roche, Mr. Mooney, Commissioner Riley, and Messrs. Hurd, Medill, Cooley and Ewing. The point which the Joliet people insisted upon was that the ship canal should go to Lake Joliet, and that the trustees should not have any rights to dockage or water power outside of the drainage district. They finally so far receded from that position as to give to Chicago the water power and dock privileges created so far as the channel should actually be constructed, still insisting, however, that it should go to Lake Joliet. But the matter was finally settled by the agreement that so far as Chicago shall extend the canal, she shall have all these privileges, but they shall not extend beyond the point where the main work actually terminates. Chicago reserves the privilege of going to Lake Joliet if it should desire."

5562 (It was agreed between counsel that Mayor Roche of Chicago, there referred to, now dead; that Medill, editor of Tribune, Harvey B. Hurd, one of authors of Sanitary District Bill of 1887, and Mr. Mooney, are dead; that Cooley and Ewing and Riley are alive, and that article had to do with Sanitary District Bill of 1889; that the article leads up to the amendment made in that bill with reference to water power as it appears in the bill.)

5563 COUNSEL FOR DEFENDANT. I now offer in evidence from Chicago Tribune, in volume of October-December, 1888, from the issue of December 7, 1888, page 4, extract from editorial at bottom of column 5 and top of column 6.

(Objected to on the ground that it is incompetent, irrelevant, immaterial and that it consists of an unsigned editorial in a daily newspaper and not the best evidence.)

Counsel for the government thereupon inquired as to the purpose for which the editorials were offered. Counsel for defendant replied that these newspaper extracts were
5564 to be used for any purpose for which they will be pertinent, showing among other things part of the history leading up to act as it appears in statute books, and to answer proposition that owners of property down river ought not to have benefit of increased water sent

down; as tending to show it was understood and agreed at time that private owners should have use of water turned down river.

Objection; same as heretofore.

(Agreement between counsel that Medill was Editor in Chief of paper at time of publication of this issue.)

5565 COUNSEL FOR DEFENDANT (reading): "The attitude of Chicago in the present discussion as to what disposition shall be made of her sewage is marked with singular magnanimity, which ought to shame some of those who have been holding conventions and blustering as to what they would and would not allow to be done. The city has the right to drain through the canal and the river. The state orders it to spend money that it might do so and it is complying. All the sewage goes southwestward with no annoyance to the city.

The present facilities will suffice us for many years.
* * * yet, though Chicago has this certainty of sufficient drainage and pure water supply it makes the voluntary offer that it will tax its people and raise money with which to build a larger ditch from here to Joliet so that there may be a steady flow of 200,000 or 300,000 cubic feet a minute, so diluting the sewage that goes down that the keenest nosed faultfinder can detect no trace of impurity. It makes to Joliet the gift of an extensive water power and offers to start her on the road to manufacturing prosperity. Can one believe that this free-hearted generosity is so misconceived and misinterpreted that those who are to be benefited by these great gifts reject them and insist that they must be increased tenfold before they will accept them? Few men, or few collections of men are in the habit of pressing gifts on people when they have been once rejected, and if the residents of Joliet and the Illinois valley do
5566 not accept the present chance they may not get another as good for some time."

I now offer an editorial in the Chicago Tribune, Volume January-March, 1889, the particular number of the Tribune being that for Monday, January 21, 1899, and the article in question appearing in an editorial headed "Our Chicago De Lesseps," which I read.

(Reading): "The News says: That to widen and deepen the south branch so that it shall have a capacity

of two hundred thousand cubic feet a minute to the canal mouth; to dig a vast canal 200 feet wide and 16 feet deep from Lake Michigan, along, say, 39th street condemning the land and paying millions for it, to the south fork of the south branch, and down that to the canal mouth; to dig a great ditch from this point to the Cicero limits and on to Joliet, 27 miles further, 200 feet wide, and about 22 feet deep, mostly through solid rock, including all land damages within and without the city, and all damages for overflowed lands down the valley, with all rock and earth cutting, piling, etc., would cost 'from \$20,600,000 to \$24,950,000.'

This estimate is in the air. It does not say how much the cost of deepening and widening the south branch will be, how much the new 200-foot wide cut from the lake to the canal, or how much the rock cutting which we strike after leaving the summit will cost. This is too
5567 big. Before we begin breaking eggs, we must know the size of our omelet. We are asked to begin a work which in comparison to our means is as tremendous an undertaking as the Panama Canal is for France. We are now asked to make a channel wider than that which De Lesseps proposed to make, and nearly as deep. We have over 20 miles of limestone rock to cut through lifting the stone from a depth of 22 feet below the water surface and disposing of the stuff in a ridge 50 or 60 feet high. The job, as estimated by 'The News' will take 11 years, and we are told that it will cost from \$20,000,000 to twenty-five millions, the latter being a little over four times what Chicago raises by taxation each year.

But another and better authority than 'The News' estimates that to carry out the work on the plan proposed by 'The News' to the city limits alone, with land damages and construction combined, will cost more than the twenty-five millions which our Chicago De Lesseps puts down as the total cost of the work. That when that money has been spent within the city limits comes the further task of making the 27 miles out through the limestone down to Joliet. The city did a little surface scratching when it deepened the narrow Illinois and Michigan Canal eight feet. That job cost it over three million dollars. Now a man with a light heart and a fluent lead pencil invites it to make a 22-foot water

channel excavation 200 feet wide, which from the surface would be 25 to 30 feet deep and assures us that
5568 it will cost but a bagatelle.' The trifling sum of twenty-five millions will do it all.

'And there will be offsets. There will be water power.' Thus it was provided by the monstrous Hurd bill, which 'The News' supported, that we were not to have a water power. It was all to go to the people down the valley, as the price of their consent that Chicago might abate the sewage nuisance so that it would no longer smell bad to those living on the banks of the Desplaines. They still insist on it."

(Objected to on the ground that it is incompetent, irrelevant and immaterial and consists of an unsigned editorial in a daily newspaper and is not the best of evidence.)

Upon request of counsel for complainant the following portion of foregoing editorial was read:

"Many of the valley people claimed that this 600,000 cubic feet added to the natural flow at certain times of the year will flood hundreds of thousands of acres of valuable bottom land and spoil it. They must have the damages, they say, and the damage suits must not be brought here, but in the county where the mischief is done, so that a local 'unprejudiced' jury may fix the damages. How many millions of dollars must be pay out in this way? Where is the statistician of 'The News' and why does he not come forward with his detail figures? It was admitted two years ago that the scheme contemplated by the Hurd bill would cost at least forty millions of dollars."

5569 COUNSEL FOR DEFENDANT. I now offer in evidence from volume Chicago Tribune, April—June, 1889, issue of April 11, 1899, editorial page, third column, editorial headed, "Joliet Wants the Drainage Canal." (Reading):

"It appears from interviews with the leading business men of Joliet that they are with hardly an exception opposed to the crank or silly notions of Mayor Paige, whose term of office, they say with pleasure, will soon expire. Of those business men who are fighting the drainage plan a few are influenced by purely selfish reasons. They want the channel carried a little further than the bill now provides, so they may share in bene-

fits which they see others will reap. Were they just a little further north they would be sturdy advocates of the scheme.

5570 The argument of the business men who favor the adoption of the drainage bill is an intensely practical one. They say that before the deep cut gave them Chicago water the water power of Joliet would not employ twenty-five men, now there are a large number. The passage of the bill would give the city from \$300,000 to \$450,000 worth of water power per annum, says one man: 'Water power is now worth \$15 to \$20 per horse power in Joliet. This would reduce it to one-half that price.' Then manufacturers would flock there. Working men would be given employment. Hundreds of houses would have to be constructed for them to live in. Shops would be started to supply them with goods. The population of Joliet would increase even more rapidly than it has been doing during the last ten years.

The business men are also quick to see the use of such deepened and enlarged canal as a regulator of freight rates and are not so much in love with the Rock Island Road or its attorney, Sanford, of Morris, as to wish to trust themselves to its tender mercies with no chance of escape if those mercies turned out to be cruel. They say that they now have grain rates on the canal of 1-1/4 cents a bushel. When the canal closes the railroads charge three and four cents and if the canal were abandoned it would be six to eight cents. Nor do these men take any part in the idle talk about 'overflows' at Joliet. They say that it is raised only to bulldoze Chicago into improving some property in their city.

5571 As for Chicago sewage, what they ask is its satisfactory dilution, not its stoppage. They say they have been bothered by it at times in the past. But they have urgent need of the increased water supply to dilute their own sewage. For nine months of the year there is not water enough in the Desplaines to take care of the sewage of the penitentiary, to say nothing of that of Joliet. Therefore if no water came to them from Chicago the growing city would be drowned out by its own filth. As for disease from the sewage, in spite of the ravings of the Joliet health officer, with his bacilli and his ptomaines and his spores, they say there is less than there

was in the old days before the deep cut was made or the Bridgeport pumps started."

Objection; same as foregoing.

COUNSEL FOR DEFENDANT. I now offer in evidence volume Chicago Daily News, January-June, 1889, morning issue February 16, 1889, page 1, of article headed: "In Favor of the Bill. The Drainage Act Advanced—It Passes to a Second Reading—Amendments Adopted—Other Doings of the Legislature—Morris Declares for Chicago's Relief." (Reading):

"Special to the Chicago Daily News, Springfield, Ill. Feb. 15—"The whole matter is in the best possible shape," said Mr. Cooley, referring to the drainage bill, upon the adjournment of the House today. Then he added: "No unfriendly amendments were adopted. The compromise propositions which we had agreed to, were put in and also those in the interests of Joliet which they especially desired, and to which we found no objection. The others were merely verbal amendments to correct phraseology and perfect the bill.""

Then I omit, and continue reading further on, as follows (reading):

"Mr. Mooney offered an amendment to Section 5, the object of which was to prevent the district from exercising dockage and water power rights beyond the point to which the channel actually extended, and it was adopted.

Mr. Cochenour wanted to further amend Section 5 by stripping the trustees of all powers or control of docks, water power or anything else outside of the boundaries of the district, but the amendment was defeated."

5573 Objection; same as foregoing.

(It was admitted and agreed between counsel that the Chicago Daily News was then, as now, under control of Victor Lawson, and that Mr. Cooley who was quoted in foregoing excerpt as saying: "no unfriendly amendments were adopted," is the same Cooley present as complainant's witness, though not admitted he made such statement.)

Whereupon counsel for the government moved to strike out all the clippings just introduced from newspapers on the ground that they were not the best evidence; that it does not appear in any case who was the

author of the particular editorials or writings; that it does not appear that such authors are dead and therefore unable to be called upon the witness stand to testify; and further on the ground that these articles are all incompetent, irrelevant and immaterial upon the issues in this case.

5574 Witness J. W. WOERMANN, resumed the stand.

Cross-Examination by Mr. Cressy (Continued).

Do not know whether or not early and late measurements of Desplaines and DuPage rivers show that flow of DuPage is better sustained than that of Desplaines. From description in State Geological Survey reports, should say sub-soil of DuPage is similar to that of Desplaines above junction of the two rivers. Think would make no distinction between

lower and upper Desplaines as to character of sub-soil.

5575 Would say sub-soil of DuPage system was impermeable. Would say that the statement of Gooding in communication dated December 10, 1838, in Canal Commissioner's report of 1900, page 155, that, "A feeder will be taken into the canal from the DuPage, about three miles above the crossing. The last season has shown this stream to be one of the most permanent in the State, and it can be introduced as a feeder at a very moderate expense," would have weight for the one year he speaks of. That would show that for that one year the DuPage river had a well sustained flow.

5576 Conclude from State Geological Survey that watersheds of Long Run, Hickory Creek, Jackson Creek and Riley Creek differ little in geological formation, being all covered with glacial drift. Don't know if it is fact that glacial drift is much more permeable outside of ridge which runs through Lemont west of Desplaines, than within ridge.

Referring to the statement by counsel for the government that I testified that the flow of water in the Desplaines river had been increased above Riverside by the water supply of towns from artesian wells, to enumerate the towns which have thus supplied the volume of water from artesian wells, would say that my basis for that statement is the report of United States Geological Survey which states that every town on the Desplaines river gets its supply from artesian wells with the exception of a portion of Joliet. As to whether

or not of the United States Geological Report does state that the flow of the Desplaines has been increased by the fact that these towns get their water supply from artesian wells, would say I think it does, but if not there is a clear inference.

5577 I will ask you to point out if it does, where it does and while you are looking over that State Geological Report I will ask you to name the towns that get their supply from artesian wells.

COUNSEL FOR DEFENDANT. I object to the question because it is a double question and the two parts of that question have no relation to each other and can not be answered by one answer.

COUNSEL FOR GOVERNMENT. All right, you may answer them as separate questions.

A. The particular statement that I referred to is not accompanied by the statement that it has increased the flow of the stream for the very evident reason that the title of the entire report is the "Quality of the Surface Waters of Illinois," and this particular part has to do with the sources of municipal supplies. So that the run-off in the stream was not pertinent to this particular passage.

5578 The particular document to which I refer and the particular page to which I refer is entitled "Water Supply, Paper No. 239, of the United States Geological Survey," entitled "The Quality of the Surface Waters of Illinois, by W. D. Collins, issued in 1910." Page 26 under heading "Desplaines river," second paragraph (reading):

"Municipal Supplies.—The cities along the Desplaines river obtain their water supply from deep wells, except that Joliet derives part of its supply from Hickory Creek. It is not likely that the water from Desplaines River can ever be used for municipal supply except in its upper course."

As to whether it does not here enumerate the towns which receive their water from artesian wells, will say it enumerates them negatively by excepting only a portion of one town, it does not specifically by name state what the towns are to which it has reference. I still infer that the volume of water would be increased in the Desplaines river by the fact that certain cities or towns along its bank obtain their water from deep wells.

5579 I adhere to my inference that water lying in Desplaines is increased by water from towns obtaining

supplies from deep wells. Heard portion of Mead's testimony. I remember his statement, transcript 5494 (Abst., 1997):

"I doubt if the additional waters that are secured from artesian wells and find their way ultimately into the streams, would have any more effect than the forests would have."

As to whether I disagree with Mead, hesitate to answer; don't know what was in his mind when he made statement. If he meant artesian well supply would not increase stream flow more than forests would, I disagree with him. I think additions coming from sewers is well recognized addition to supply of stream; while the addition which a forest adds is a much debated question. I disagree with Mead as to the extent of the effect of deforestation. In my opinion on volume of water in Desplaines due to inhabitation, I took into account effect of tilled ground, which is that growing grain absorbs less water than forest trees and causes water to reach stream more slowly. Tillage accompanied by tile drainage usually increases stream water supply.

5581 The passage I attributed to Randolph to the effect that volume of Desplaines would pass through six inch pipe, is contained in "A concise Report on Organization, Resources, Constructive Work, Methods and Progress of the Sanitary District, dated September, 1903, prepared by the Chief Engineer," signed I. R., page 12 (reading):

"The Desplaines Valley is traversed by the river from which it takes its name—a stream with wide fluctuations with no constant and reliable fountain supply. During some seasons its whole discharge would pass through a six inch pipe, and at others its volume reaches 800,000 cubic feet a minute. Then it rolls majestically along, flooding the whole valley. Such being the situation, control of this stream was a condition precedent to the successful prosecution of the work upon the main channel."

COUNSEL FOR GOVERNMENT. I will ask counsel if they will have that document here so we may examine it.

COUNSEL FOR DEFENDANT. I don't know whether it is available to us or not. I have it listed among the evidence in the state case that will be used by us in this case. I suppose it can be found in the Sanitary District here. I have never seen a copy of it except the one we had in court.

5582 COUNSEL FOR GOVERNMENT. I would like to have that produced because I would like to cross-examine the witness further upon this particular passage.

Have never seen Desplaines entirely dry, though have seen DuPage in that condition when located at Dresden Heights on construction of Economy Company's dam; in the fall of 1907, at Channahon below State Dam.

As to whether all of the water then in the DuPage river was passing down the Illinois and Michigan Canal from the State Dam, I would say I do not know whether any

5583 water was coming down the DuPage river or not. Did not see DuPage above said dam. Have never seen Jackson's Creek, Hickory Creek or Rock Run entirely dry. As to whether it is a fact that Hickory Creek is today used for supplying part of the City of Joliet with water according to this State Geological Report, heretofore referred to, will say all I know about it is what is contained in that statement.

5584 Discussing Riverside gauge readings I took as period of navigation April 1st to December 1st, which corresponds with official period of navigation on Illinois and Michigan canal which is period during which canal is maintained and operated for navigation purposes. Coincides with period Illinois is navigated. Presume Summit level of Illinois and

Michigan Canal was used after December 1st when not

5585 frozen. Also have seen it out of business before December 1st because frozen; the year I was located at Dresden Heights. If not frozen would be no objection to using Desplaines or Illinois after December 1st or prior to April 1st; would hardly depend in each case on whether or not river was frozen, because boats to do business must know beforehand what it is going to do, and it is so uncertain before April 1st and after December 1st that boats do not try to run;

do not wish to take chances being caught in ice. Know 5586 of no official figures on duration of ice in northern Illinois streams. Ice in upper Illinois generally goes out about March 1st; river often freezes after ice first goes out. In some years it is true that in latter part of February and March there is little or no ice in upper Illinois or Desplaines; not always true. Don't know whether drainage canal has ever been frozen over since it was open in 1900; admitting that it is, it is not the Desplaines river.

5587 During winter was at Dresden Heights, river was jammed full of ice from bank to bank, though didn't

freeze over solid, yet absurd to speak of it as navigable. The point full of ice was entire stretch from mouth up to Shanahan; above aqueduct piers in large patches; piers would always pulverize it, and below them always badly broken up. Would have been no ice there if piers had been removed; would have floated out in large pieces, though would not melt. Have seen Desplaines frozen from shore to shore since 1900; part of it came from above, part formed there. Shanahan level I mentioned as filled with ice, is no more level than any other stretch of Illinois-Michigan Canal. There is a very noticeable current in rowing a boat up-stream. I believe that navigation on Lake Michigan at Chicago extends after December 31st and begins prior to April 1st, some years in the case of tramp boats, but is generally without insurance, indicating the extra hazardous nature of such navigation. Could be likewise done on Desplaines river under same conditions.

5589 Have general knowledge of insurance rules respecting river boats. Steel barges on Mississippi get low rate compared with that of wooden boats. Companies won't insure cargo when danger of ice on river. As to whether or not insurance rates go off December 15th and come on whenever Mackinaw Straits are open, I think date has varied at times. Do not think that was case in 1896, when I was stationed on Chicago river. Partial reason for rule on 5590 lakes is danger of storms during winter, which are likewise dangerous on streams; river boats become unmanageable, and more apt to be lost in bad place than lake vessel because practically all out of water. Have had experience with river steamers; one year during vacation while I was at school was clerk on steamers between St. Louis and New Orleans; later made trips on Mississippi and Missouri. During survey for 14 foot waterway from Chicago to Mississippi had three steamboats under by direction and three-quarter boats; cared for them through several storms. Period of navigation 5591 on Mississippi about same as I used in table. Depends on water in Mississippi; was no arbitrary period. Don't know that boats on Lake Michigan run regularly between Chicago, Milwaukee, and other points throughout the winter.

5592 Merchants Exchange of St. Louis has kept record of duration of ice on the Illinois river for great many

years. Cooley's 1896 report on Deep Waterway, gives much data relating to period that ice covers various waters in this latitude. At some of these points period would run over forty to sixty days; average period probably not over two months at St. Louis, but is irregular and can not be fixed as coming between definite dates. Think Cooley's Report of Internal Improvement Commission, states navigation is stopped by ice in the Chicago latitude for about five months in the year.

5593 Am generally familiar with the precipitation records during the period for which the Riverside Gauge was kept. It is not true that the period for Riverside Gauge, from 1886 to present, is one of lowest precipitation that we have had in last sixty-eight years; would have to break period into shorter periods. During that interval were some remarkably wet years; some were particularly dry years.

5594 Seddon who prepared the profile of 1899, made a survey of the Desplaines in 1899 and 1900; that was Bar-law Board survey. Portions were officially published by the United States; an index map to the large sheets was published with the report; large sheets never lithographed or attached to any official report of United States Engineer's office.

5596 Seddon took soundings, many of them by men wading in river, some from a skiff; got elevation of river bottom at frequent intervals from Joliet to mouth.

As to whether I would call it a precise survey, I would say I am not familiar with the expression. To characterize the kind of survey which Mr. Seddon made, would say it is a survey of the kind which is usually made in connection with reports on proposed improvements of rivers. To explain what I mean, would say, he had a number of parties—topographical parties determining ground elevations on each side of river, so that they could be platted and contours drawn. Then he had a hydrographic party getting similar data for river surface and bed. Had two level parties running levels, establishing bench marks, furnishing basis for operations of topographic and hydrographic parties with reference to elevations. No precise levels were run on Illinois or Desplaines until my survey was made. I used Seddon's maps as basis of my revised and corrected maps, which were issued with my report. I added considerable to topography he had not taken; my instructions were to take everything up to flood line of 1844; in some cases Seddon did

not go that far; added many miles railroads, highways
5597 and fences, not shown on Seddon's map; added names
of all land owners and houses, all tributaries and
islands. Triangulation stations and precise level bench
marks established under my direction, and other details. I
was instructed to take the topography of all lands lying
below flood line of 1844 in Desplaines valley which in gen-
eral meant back to the bluffs. Don't think Seddon used
Keating's survey of Sanitary District, made in 1896, as basis
for corrections, etc., concerning Desplaines river. Have
seen many field books filled with level and topography
5598 notes taken by his parties; part of them related to
Desplaines. I examined them and know. It is not fair
to say that all I did on Desplaines in survey of 1905, was
examination of data left by Seddon and reports of vari-
ous parties I had in field, taking topography, property own-
ers, and other data, with an occasional visit to one or two
of the parties on the Desplaines. During time my parties
were in field north from dam number 1, at Joliet, I was in
that part of valley perhaps once a month. Am unable to
give times and places. Parties were in field probably
5599 year and a half from time secondary triangulation
party entered area, until last party finished. A great
many were working on topography along banks, and not in
river itself.

I testified that volume of water represented on Seddon
profile below mouth of Jackson Creek was 800 feet per sec-
ond. Assuming that the total area of Desplaines water shed
to that point is 1,026 square miles, don't know what average
flow of stream there would be. Know of no reliable method
to figure it from data given.

5600 Ordinary run-off of streams of character of Des-
plaines varies from five per cent. to seventy-five per
cent. of rainfall that falls on water shed, water sheds being
the area.

As to whether I can undertake to state it closer than 5
to 75 per cent., meaning now the average for a great num-
ber of years, would say that average would probably be in
the neighborhood of 25 per cent. That would amount to
in depth of water on the water shed as a matter of mathe-
matical computation to about 25/1000 of an inch per day, for
a long period of years on the assumption that run-off would
average 25 per cent. of the rainfall. For a year that would

be a depth of the water shed of about eight inches, taking 32 inches as the run-off for one year for this purpose.

5601 Whereupon counsel for defendant offered in evidence the following extracts from The Lakes And Gulf Waterway, as related to the Chicago Sanitary problem, dated May 1st, 1891, by L. E. Cooley, (reading page 52):

“Low Water Volume.—The Desplaines has been measured twice for low water; in 1887, 256 feet per minute, and in 1879, 339 feet per minute, both between Riverside and Lockport. The extreme low water at Wilmington on the Kankakee for twelve years, 1871-83, was 25,200 feet per minute. A measurement made Sept. 5602 9th, 1867, at the mouth of the Kankakee in connection with Gen. Wilson’s survey, gave 27,377 cubic feet per minute. The water was said to be lower in 1867 than for the previous twelve years. The quantity in the Fox river, September 17, 1867, was 31,539 feet per minute. The Mazon was practically dry.

From May 13-28, 1887, at Morris, the water was within two or three inches of the lowest since 1856, and it is doubtful if the land water exceeded 15,000 to 20,000 cubic feet per minute or 250 to 350 feet per second. At least sixty per cent. of the low water volume passing Morris in 1887 came from Lake Michigan by the Illinois and Michigan canal, and probably one-half of the volume in ordinary low water years comes from this source. A measurement has been made at La Salle by the canal authorities before the canal was deepened, of 37,980 cubic feet per minute, and doubtless Lake Michigan water has represented one-half the volume passing in some recent low water periods.”

Also from page 53 (reading):

“The record shows that about one-half of all notable rises in fifty-six years, have occurred at the spring break up, when the river could not be navigated on account of ice, and that floods which have occurred at other times of a height of fourteen feet and over, have not for fifty-six years, averaged three days out of banks, 5603 and probably for one-half this time, not above fourteen feet, or over the limit of 30,000 to 35,000 cubic feet per second, discharge, which is stated as the navigable limit in the above extracts.”

From page 57 of the same volume (reading):

"Low Water Determines Ruling Navigable Depths.—The long low water period, and the extremely small volume of flow at such times, makes it necessary to contemplate the full depth to be relied upon as available for navigation, the same as for the Chicago Divide; and also, to use water from Lake Michigan, even for an exclusively slack-water scheme of small proportions. The present small canal has always had to rely on this source down as far as the Kankakee, and even below this point, the natural supply may, at times, be quite inadequate for any considerable commerce. The high water period is altogether too brief and uncertain to possess any availability for navigation greater than will be due to the minimum depths which the project contemplates."

And at the same time I want to read one or two extracts from *The Lakes and Gulf Waterway*, which has been identified by L. E. Cooley, the particular pamphlet being dated Chicago, January, 1888. I read from page 9 (reading):

"The long low water period of the Illinois, often half the boating season, and the small depth on the bars (two feet to four feet) largely restricted the canal to
5604 local commerce. In 1852, the general government made a small appropriation for dredging but it does not appear that either the state or nation made farther effort until the events of the civil war brought the military utility of the route prominently to the front. In 1866, Congress ordered surveys and a project 'for a system of navigation, by way of the Illinois river between the Mississippi and Lake Michigan, adapted to military, naval and commercial purposes.' General J. H. Wilson made a preliminary report in 1867 and in conjunction with Mr. Gooding, engineer of the Illinois and Michigan Canal, a final report in 1868.

The examination and surveys were comprehensive including not only the main route to Chicago, but also lines up the Fox, the Kankakee and to the Calumet. The Fox and Kankakee routes were not found practicable, and the Calumet line was not regarded favorably on account of absence of harbor facilities and greater length, and because it 'would cost a great deal more.' On account of 'the necessity for rock excavation . . . sufficient to preclude the selection of that route for the enlarged canal.' "

I read now from page 2 (reading):

"Effect on Illinois river.

During a large part of the year the Illinois river is shallow, sluggish and at times stagnant and unhealthy, and unfit for profitable navigation. The large volume
5605 of water which will be steadily poured into it from the lakes (600,000 cubic feet per minute) will make it at all times a capacious and vigorous stream, purifying itself, constantly promoting its own improvement, navigable for the largest Mississippi steamers, the central artery of the lakes and river commerce and a naval station for lake and river gun boats."

And also from pages 22 and 23 (reading):

"From 1871, when the deep cut was completed, to 1884, the canal carried by gravity to the Illinois river from 15,000 to 35,000 cubic feet per minute, sufficient to raise the natural low water at La Salle from five inches to one foot, and half as much in the lower stretches of the river. From the spring of 1884 to the summer of 1887, the water pumped has increased from 30,000 and 40,000 cubic feet to 60,000, the latter amount being sufficient to raise natural low water at La Salle about one and two-thirds feet.

General Wilson finds that the natural low water volume of the river below La Salle will only provide a channel four feet deep and 160 feet wide by dredging through the bars. Major Lydecker finds that the low water volume below the Copperas Creek Dam (Oct., 1879, 1,566 cubic feet per sec., of which one-sixth came from Lake Michigan), will supply a channel six feet
5606 deep and 200 feet wide through the bars. The discrepancy between his results and those of General Wilson is ascribed to the omission of the stretch above Copperas Creek, then slackwatered; but certainly the contribution from the canal in 1887, not less than half the total volume passing La Salle, would have enabled a six foot navigation to be obtained from La Salle to the mouth."

On pages 32 and 33 (reading):

"4. The present natural water supply of the river is inadequate to the present pollution (occasioned by stagnation aided by the dams and sewage of the towns along its course) without the water supplied by the Illinois and Michigan Canal from Lake Michigan even

if the river received no sewage from Chicago. This supply was probably over one-half of the low water flow past Peoria during the low water season of 1887.

At Morris, the water was as low as known for fifty years, notwithstanding that the flow in the canal was raised to 60,000 feet per minute or considerably in excess of former years. The low water discharge of the Illinois and the proportion of canal water is given in testimony referred to in section two, page eleven *et seq.*"

5607 J. W. WOERMANN (resuming):

Cross-Examination by Mr. Cressy (Continued).

Q. From the estimate that you have given of the fall of eight inches on the water shed of the Desplaines river valley, what would be the flow of water at the mouth of Jackson's Creek?

Objection; incompetent, immaterial and irrelevant; not proper cross-examination. Does not contain necessary hydraulic elements on which to base conclusion.

5608 The WITNESS. For the purpose of this computation I assume area to mouth of Jackson Creek as 1,026 square miles, which includes Jackson's Creek. If computation is correct, total flow per average year on the assumptions given would be 13,939,000 cubic feet per year.

Q. What would an average flow be, say reduced down to per second?

5609 Objection; average would throw no light on issues of case. Evidence shows at times of flood run-off is rapid, and condition of river subject to frequent changes, at times flowing at rate of 800,000 feet a minute and at other times no flow, and in some years over half of eight inches will run off in a single month.

A. If have made no mistake in computation, it would be 610 cubic feet per second.

5610 The average rainfall for the Desplaines basin is 31.82, at least for the period from 1890 to 1899, covered by Harmon's report. Am unable to say whether that was a period of deficient rainfall, without the aid of a table. Some years drier and some wetter than usual.

5611 The annual Weather Bureau rainfall report shows the precipitation for various stations, as follows:

Aurora 28.11, a deficiency of 7.36 inches,

Chicago, 26.86, a deficiency of 6.42 inches,

Joliet, 24.29, a deficiency of 9.06 inches,

St. Charles, 25.73, a deficiency of 11.16 inches,

Yorkville, 25.93, a deficiency of 8.14 inches.

5612 These five stations would show conditions which prevailed in Desplaines river valley for year 1910.

Q. Will you total those and see if that gives you an average precipitation for the five stations of 26.18 inches?

Objection; figures in record.

A. That would make average rainfall for year 1910, 26.18, and average deficiency 8.43.

Q. That would make a mean precipitation, would it not, of about 34 inches?

Objection; two of the stations not shown in computation.

5613 A. 34.6 inches.

Q. I show you a precipitation record of Chicago from 1843 to 1910, inclusive. Assuming that it is properly certified and authenticated. I ask you if it does not show a non-official record from 1843 to 1870, and the official record of the United States from 1871 to 1910, a mean precipitation from 1843 to 1870 of 34.66, and from 1871 to 1910 of 33.52?

Objection; figures limited to precipitation at Chicago, it not appearing that Chicago precipitation and that for Desplaines would be the same.

5614 A. Yes; have not checked it carefully, but average precipitation for 68 years of about 33.99 looks all right. Table shows precipitation for 1867, 22.40; 1890, 32.69; 1891, 26.54; 1892, 36.56; 1893, 27.47; 1894, 27.46; 1895, 32.38; 1896, 33.14; 1897, 25.85; 1898, 33.77; 1899, 26.49.

Q. Assuming drainage area of 1,026 miles at mouth of Jackson's Creek, you computed average flow of Desplaines water shed at 610 cubic feet per second. How would
5615 that be increased at the mouth of the river or at Morris, Illinois?

Objection; incompetent, irrelevant and immaterial; because of rapid run-off and wide variation in flow, and so forth.

5616 I give it to you at mouth because I got that before I go other. Based on ratio furnished by counsel, namely,

area to and including Jackson's Creek, 1,026 square miles, total water shed, 1,358. Flow at mouth would be one-third greater, or about 810 cubic feet per second. According to data used in my computation, area of Desplaines to the mouth is not 1,392 square miles, but 1,358. The area I gave on my water shed map which was based on Government estimates. It is not to my knowledge the custom among engineers to assume depth of 11 inches, on all river basins lying east of Mississippi river. My reason for assuming 8 5617 inches was that it was 25 per cent. of 32. Based on their relative areas above mouth of Desplaines and area you gave as area down to and including Jackson's Creek, there is an average difference of about 200 second feet between the mouth of Jackson's Creek and mouth of Desplaines.

Q. If fall on water shed was 34 inches and average run-offs 11 inches, you would have in neighborhood of about 800 second feet at mouth of Jackson's Creek, and about a thousand second feet at mouth of river, would you not?

Objection; incompetent, irrelevant and immaterial; evidence shows floods run off quickly; river condition subject to frequent and rapid changes, etc.

5618 A. Refuse to be drawn into any discussion on that hypothesis because I think there is no basis for it.

Motion to strike out.

5619 Having been advised by counsel for defendant that am under no obligation to answer question, I decline to answer.

Q. If you had made this computation and found an average run-off at mouth of Jackson's Creek of 800 cubic feet per second, what would you say as to interpretation you have put on Seddon profile as showing low water in 1883 of 800 second feet at mouth of Jackson's Creek, when you consider that in 1883, in addition to drainage area, considerable quantity of water was emptied into Desplaines from Lake Michigan through Illinois-Michigan Canal?

Objection; incompetent, irrelevant and immaterial; calls for conclusion on something witness did not do, etc.

5620 A conclusion drawn from averages of that sort have absolutely no value. Have no reason to doubt accuracy of results shown by discharge curves and flow line because entire flow of eight inches usually runs off in three or four months, leaving very little for remaining eight or nine months.

Seddon profile seems to show that in his opinion, he did not think contribution from Jackson's Creek was sufficient to justify making change at that point. Can't say whether Seddon made allowance for contribution from DuPage river. Probably, in his opinion 800 cubic feet per second for flow below DuPage river and for convenience he extended that value up stream to be safe in computing for waterway or construction works that might be placed. Seddon profile shows line interpreted to be 800 second feet as extending up to Joliet.

Seems to show he took that as low water flow of Des-
5621 plaines river. Don't think there is an increase of about
50 per cent. in water shed below Hickory Creek and
mouth of river, than at mouth of Hickory Creek. Think
area Hickory Creek water shed about 130 square miles.
5622 Which, subtracted from 924, leaves in the neighborhood
of 800 square miles, or more than 50 per cent. of entire
water shed of Desplaines Valley. As to low water discharge
of 800 second feet on Seddon's profile, which extends
uniformly from Hickory Creek down through Valley of Des-
plaines to mouth, would not interpret it as not giving
credit to additions from tributaries in that 50 per cent. of
water shed, but that he found that to be the flow near the
mouth, and, to avoid further refinement, concluded he would
call it 800 all the way up and play safe. When you con-
sider the purpose he had in mind, it would not be as fair
to interpret the 800 second feet as above mouth of Hickory
Creek as at Jackson's Creek. He was designing structures
and preparing estimates for a water way so he would have
everything large and ample enough if he took the larger
vaue. It is my hypothesis that he took 800 second feet as
an outside figure. Don't know what Seddon had in mind.
Have consulted Wisner survey of 1883. My attention is di-
rected to Marshall's map which covers Treat's Island and
is labeled Sheet No. 13, and entitled "Map of Treat's Island
and Vicinity, surveyed in accordance with an Act of Con-
gress August 11, 1888, under the direction of Captain W. L.
Marshall, Corps of Engineers, U. S. A., by L. L. Wheeler,
U. S. Assistant Engineer, 1888-1889." The first soundings
appearing at Treat's Island, showing a maximum depth of
3.2 could not be utilized by a boat. It is close to sort of bay
at extreme point of island. Soundings for the line are 2.2;
3 feet, 3.2 feet; 2 feet; 1.6 feet; 1.7 feet; 2 feet; 2 feet; and
1.6 feet. On opposite side of river from that line of

soundings, down on left hand side of Treat's Island is shown a maximum depth in two places of 2.5 feet and in next line of soundings a maximum depth of 2.31, and in next line, a maximum depth of 3.2, which is on opposite side from deepest point in this line, which means that between lines of soundings would not have maximum depths you read in each line. This would become evident if you drew contours for river bed, same as you draw for ground surface. Currents do not change from one side to the other in river bed in such a place and for such a short distance. In such a long concave bend, current hugs concave bank. Does not go from concave convex side. Second line of soundings from head of Treat's Island is as follows: 1.9; 2; 1.6; 2.5; 2.5; 1.5.

Next line of soundings is 1.1; 1.3; 1.2; 2.3; 1.5; 1.6. 5626 Next line is 1.6; 3.2; 1.9; 1.5. Near enough to say that from first line of soundings to 4th line would be about 900 feet, or soundings 300 feet apart. As Seddon had nothing to do with lower Illinois, I see no basis for statement that the scale of his profile was made for the flat slopes which exist on lower Illinois. It is usually customary to exaggerate a vertical scale where the slopes are very slight.

5628 Whereupon the examination of the witness was suspended and counsel for defendant offered in evidence volume of the Chicago Daily News, October-December, 1888, from Chicago Public Library files, Morning News for Tuesday, December 11, 1888, page 2, editorial headed, "The Rights of the Valley."

(Reading):

"Our drainage contemporary occasionally experiences a semi-lucid interval. It has admitted that 300,000 cubic feet a minute is required in a drainage channel for proper dilution—for what time in the future and for what population is not stated. It now admits that the valley towns have the right to an abatement of the nuisance, though no right to exclude the sewage from the valley, and that Chicago should provide 'a channel broad and rapid and six to eight feet in depth.'

If our contemporary will employ a little elementary hydraulics it will find that 'a channel broad and rapid' to carry 300,000 cubic feet will cost considerably more than one deep and narrow for twice that volume. So far as oxidation is concerned, the large dilution will be

more effective than any breadth which it is feasible to give. The deep channel has been advocated by this journal on account of its economy in cost and on account of the small variation in flow due to high water and to its being covered with ice in winter.

Our contemporary falls back on our 'vested right' to turn sewage into the valley, providing we do not create a nuisance. It of course admits that such privileges as we have by joint resolution of the legislature can be suspended by the same authority.

No town has any right to impair the utility of a stream, and in that respect we stand on the same footing as the towns in the valley. But we own no riparian rights at points where we can discharge into the stream, and, if we did, any such point, if beyond our jurisdiction, could only be reached through legislative authority. What privileges we obtain are simply by legislative enactment, and can be coupled with such requirements as the legislature chooses to lay down. This is the plain long and short of it, and the river people have been clear upon the subject ever since the agitation started.

So far as water power is concerned, the Supreme Court holds that control ceases when the flow is turned into a public stream.

The whole question is simply one of comity, an attempt at bulldozing the people with whom we must treat accomplishes no wise purpose."

5630 Objection; incompetent, irrelevant and immaterial; unsigned editorial, author unknown, and no reason being given for the introduction of this newspaper writing in place of testimony on which the government would have the right of cross-examination.

COUNSEL FOR DEFENDANT. I offer from volume headed "Chicago Daily News, January to June, 1889," issue of February 15, 1889, page 1:

(Reading):

"Mayor Paige is heard. He Attacks the Drainage Bill—Riley and Roche Answer him in the House—Amendments Agreed to—Victory for Merritt's Anti-Trust Bill—Two Nominations made.

Special to the Chicago Daily News. Springfield, Ill. Feb. 14. The drainage and canal question got a much better presentation before the legislature today than

it did yesterday. Mayor Roche was feeling in fine spirits and made an admirable speech on the question before the House Committee of the whole."

Now I omit and continue reading further on (reading):

"A resolution endorsing the bill had been adopted by the Marseilles business men's association was introduced and then Mayor Paige of Joliet, presented his objections to the measure. He held that the bill gave the trustees of Sanitary District power over Joliet docks, and he objected to such power. He desired also some
5631 other method of computing the dilution of séwage. The work to be done under the bill would end three or four miles from Joliet, and the water would there spread out into a great stagnant marsh to the detriment of health, he claimed."

I omit then again (reading):

"Mr. Riley, of Joliet, briefly explained the situation at Joliet, showing that the call for the public meeting there in favor of the bill, was signed by representative citizens, and that there was a large attendance of this class of persons, who almost unanimously adopted the resolution in support of the measure."

Then I omit, and quoting now from Mr. Riley's speech, I read (reading):

"Among other things Mr. Riley said: 'Now, gentlemen, right in the face of this call for Tuesday's meeting, this man (Mayor Paige) has seen fit to come down here with a delegation and give utterance to views that his own delegation is not in favor of. All that he has in mind is the utter abatement of the sewage coming down the valley at all. I am not here to favorably agitate the Chicago sewage question, because I am not in favor of the sewage coming down our valley if it could be prevented. However, it appears it cannot be, and that being the case, I will say that if this scheme is carried out under the intent of the bill, it will not create greater injury to Joliet than now, but virtually be a benefit.
5632 That is what I think. Without Chicago's pumps now we would have to shut down every factory in Joliet, and we would have to shut down Norton's water power. Now, is this increased water power that this bill will create in the interest of our town or in the interest of Chicago? I think it is to our interest as well as to Chicago's, and that it is to the interest of the state at large.

Now, gentlemen, if there are any safeguards that you can throw out in the interests of the people of the valley, for God's sake do it, because they need it. If there is anything that we have omitted and that ought to be in this bill to protect us, it is something that has been overlooked by the Chicago representatives as well as by the rest of us, and I hope you gentlemen will put it in."

Now going on after remarks by Mayor Roche (reading):

"Proposed Amendments. Mayor Roche and Mayor Paige had an animated discussion in the House, which was a private conference and an interchange of views. At night there was a meeting of Mayor Roche, Mr. Medill, Mr. Cooley, Mr. Riley, Mr. Mooney, Mr. Ewing and others, when the advisability of amending the bill was considered. The point at issue was that the ship canal should go to Lake Joliet, and that the trustees should not have any right to dockage outside of Cook
5633 County. Joliet receded from this position and gave Chicago privileges of dockage, and water power so far as the canal proper is constructed. Subsequently an agreement was reached and the amendments will be presented tomorrow. But it is presumed he will not longer antagonize the wishes of the Will County representatives."

Whereupon a specific objection was made to this particular discharge on the ground that it attempts to represent the result of a conference, of which conference there are living witnesses today who can be brought into court to testify.

Woermann Cross-Examination Continued.

As to whether or not it is more difficult for the ordinary person to understand a profile of a river which has a natural declivity when that declivity is shown as in the Sanitary District case on an exaggerated scale, would say I cannot see that it would be, if it was not exaggerated it would be of almost
5634 no value. It is customary to exaggerate the vertical scale whether the slope is flat or steep. The Seddon profile is exaggerated more than is actually necessary to show the declivities between Joliet and the mouth of the river; possibly at the rapids, but I think the profile is very well prepared on the whole and is in harmony with what is usually done. I said on direct examination that Mr. Cooley's profile began at Joliet while mine was extended to Lockport.

As to whether this is not a criticism in regard to accuracy but is just a difference in regard to territory covered and not in regard to the accuracy will say I think I so stated on my direct examination, I don't remember without referring to my testimony.

Whereupon the record was read as follows (p. 2568, Abst., 1060):

"What effect upon the appearance of the slopes, so far as the visualizing of the effect of the slope is concerned has the changing of the scale by Mr. Cooley?

A. Mr. Cooley's profile makes the slope look flatter than the original from which mine was traced. Permit me to supplement my answer?

Q. Yes.

A. There is also this difference; Mr. Cooley's profile begins at Joliet while mine has been extended up to Lockport. That is not a criticism in regard to accuracy, however, just a difference in the territory covered."

5635

Then this question:

"Q. That is, you have taken more of the original than he has, is that right?"

And you answered:

"Yes, sir."

A. That answer is wrong in so far as it would apply to Mr. Seddon's profile, because Mr. Seddon's profile does not go above Joliet, and Mr. Cooley's profile stops at Joliet. In order to continue my profile above Joliet I had to adopt another profile.

As to what was my motive in extending my profile up to Lockport while the Seddon profile only extended to Joliet, would say because during the trial of the State case the Economy Light and Power Company requested that a 5636 profile be drawn from Lockport to the mouth. Although this particular Seddon profile does not extend to Lockport, yet the profile which was published with his report does extend to Lockport. I did not use the Seddon profile from Joliet up to Lockport but I used the Marshall survey. My purpose in using the survey of 1883 as far as Joliet and the survey 1889 by Marshall from Joliet to Lockport when I had a survey by Mr. Seddon for that territory was that Mr. Seddon's profile from Joliet to Lockport followed the line of the Illinois and Michigan Canal and what I was platting and wished to show was the profile of the river.

Q. On page 2572 (Abst., 1061) of the record Mr. Woermann I asked you to give me the official title of the profile of the United States Engineer's office of which your Seddon profile was a tracing. You stated you could not recall the way in which it was labeled and I thereupon asked you if you 5637 could furnish that to me at a later date. Are you prepared to do so now?

A. The title or label on that profile was essentially the same in substance as the one which we all looked at in the United States Engineer's office at the time of my direct examination, but the particular one, as you remember, the men in the office were unable to find at that particular time and I have not been there since. The one which we saw in the United States Engineer's office did not have any title upon it except a title in pencil which was read into the record at that time.

Q. There was nothing to show that that title was put on there by Mr. Sedden or anybody under his direction? There was nothing to show that that title which we there found was anything more than a memorandum put on there by some member of the office force of the United States Engineer's office, is that correct?

A. I do not think there is any reasonable grounds for such a statement Mr. Cressy. As I stated at that time that was one of a number of papers which constituted the rec- 5638 ords of the 1899-1900 survey, which at the time of my survey were still all contained in one box, and for the reason that Mr. Seddon's connection with the government was terminated very abruptly, things were not finished up as they really should have been; but because some titles or notes were left in pencil and were not finished up in good style I think it is no reasonable ground for questioning their accuracy or standing.

Mr. CRESSY. I move to strike out the answer as not responsive to the question, and I will ask to have the question read again.

(Previous question read.)

A. It is not customary for the assistant engineer in charge of a survey of that kind to sign the maps or profiles or hydrographs and such things.

It is not customary for the engineer under whose direction the survey is made to sign it. I don't think you will find a single—I know you won't find one of the 58 maps which were

prepared under my direction that has my signature on it; nor one of the profiles or any of the plans of locks and dams. It simply states in the title, those that were finished up, that they were prepared under my direction; and on those that were not finished that does not even appear.

Q. Do not those maps and profiles, for example, those you have just referred to, bear title, and it is not a fact that the Seddon profile that you have called attention to does not bear any such title; is not that correct?

5639 A. You were speaking about signing a moment ago, when I made that reply; about their being signed.

Q. Just answer my question.

A. I am trying to answer them to the best of my ability.

Q. Read the question Mr. Satterlee.

(Question read.)

Mr. SCOTT. It is objected to on the ground that it has already been answered specifically; and is further objected to because it is two questions in one, each independent of the other.

Mr. CRESSY. You may answer.

It did not bear any title in ink, it was labeled in pencil sufficiently to show what it was. As to whether I would say that the marks in pencil which I saw on the profile in the United States Engineer's office would be denominated a title, would say I see no reason why it should not so be called. As to whether the pencil memorandum was on the back of
5640 the profile and not on the face would say yes; the pencil memorandum might be called a title. A title, when a drawing is finished up properly and inked in, as for example, in the maps accompanying the Captain Marshall reports, and in the maps and profile accompanying the 14-ft. waterway report and all other reports is put on the front of a drawing. I understand navigation on the Sanitary District channel at the present time extends to Dam No. 1 by means of drainage channel, old drainage channel to Lockport and new channel recently constructed between that point and Dam No. 1.

Q. What bearing has the slope of the Desplaines river from Joliet to Lockport, shown on profile you have submitted, upon question of constructing a navigable waterway by using Sanitary District channel and Desplaines river?

5641 Objection; incompetent, irrelevant and immaterial; not cross-examination.

A. None that I think of at present time.

Q. If we constructed waterway for navigation between Chicago and Morris, we would use Sanitary District channel to Dam No. 1, and Desplaines river from Dam No. 1 to Morris, would we not?

Objection; same as foregoing.

A. For general purposes, would say yes. Would not use river over Joliet rapids. As for balance of way, would build lateral canal about three miles above those rapids, then enter river below Brandon's Bridge and use Desplaines for balance of distance. When I stated on direct that distance of rapids at Treat's Island was 1.1 miles, referred to 5642 my profile based on Seddon profile. Measured distance along left-hand channel, going down stream. Otherwise known as south or east channel. I used point half mile immediately above mouth of Desplaines in measuring rapids as one-half mile. One point would be substantially mouth of Desplaines; other one-half mile above. On transcript page 2575 (Abst., 1062) said there was a fall of about three and a half feet in about one-half mile, which, as stated, is half mile immediately above mouth in distances from Dam No. 1 5643 from a point 80,700 to a point 83,300, which gives a difference of 2600 feet and fall of 3.7 feet between these points.

Q. You state on your direct examination that in computing the reading of 13.1 upon the gauge at Riverside you used the figures of Mr. T. T. Johnson, an expert witness in the State case. Was there not in existence a discharge curve in the possession of the Sanitary District which was regularly in use by the Sanitary District? On record page 2583 (Abst., 1065), a question was asked you by Mr. Scott as follows: "Now, Mr. Woermann, starting with the flow of 800 feet per second between Dam No. 1 and the mouth of the river, how do you arrive at the depth of 1.7 feet flowing over the bar at Riverside, for a gauge reading of 13.1 at that point?"

A. According to the table of discharges introduced by Mr. T. T. Johnson in the State case, this corresponds to a 5644 reading of 13.1 feet at Riverside."

A. I presume there was in existence a discharge curve, I did not use this discharge curve of the Sanitary District for two reasons. In the first place I do not have a copy of that table; in the second place in an issue in which the Economy Light and Power Company was concerned I would be very suspicious about using any table that was furnished

by the Sanitary District. I happen to know something of the feeling that exists—

Motion to strike out the answer.

5645 A. (Continuing.) Between the officials of the Sanitary District and the Economy Light and Power Company. Furthermore I doubt whether the Sanitary District of Chicago would furnish me with a table if I asked
5646 them for it. I do not know whether it is a fact that the Sanitary District had established this curve a great many years prior to the state lawsuit against the Economy Light and Power Company being instituted, and in fact for ten years had regularly made use of this discharge curve. Mr. T. T. Johnson was an expert witness on behalf of the Economy Light and Power Company, but the table which he used was presented to Western Society of Engineers about 1896, while he was working for the Sanitary District. I arrived at figure that there would be less than fifteen inches between Romeo and Lake Joliet when there is a reading of 13.1 at Riverside with a volume 550 second feet from my familiarity with profile of Desplaines, knowing depth is at least that much less on rapids than at other points. Width at Riverside about
5647 150 feet. Width in rapids between Romeo and Lake Joliet very variable. Have seen it number of times. Slope at that point very variable. Total fall 77 feet in about 11 miles between Romeo and head of Lake Joliet. Never made any cross-section of stream at any point to determine whether there would be depth of fifteen inches or more, but Seddon profile, which I adopted, and which is subject of this discussion shows less than 15 inches on Joliet rapids; and that slopes between Lake Joliet and Lockport were steeper than anything below Lake Joliet. Therefore, plain inference is that depth there would be less.

5648 As to whether my answer to this question would depend somewhat upon the width of the stream, would say, yes, I took that into account. As to whether I took into account that the profile I am now referring to shows a volume in the neighborhood of 800 second feet from the rapids at Joliet, and we are now referring to other points where there was not that amount of water flowing, would say I am assuming that the river was in a state of nature, and basing my answer on the relative slopes and widths as I know them from personal knowledge. Assuming flow of 550 feet at Riverside, you would have considerable increase of flow at mouth after had flow from DuPage and other tribu-

tary streams emptying into Desplaines in addition to 550 feet. Would be no material increase between Joliet rapids and those above pool created by Dam No. 1. In my computation at transcript page 2583 (Abst., 1065), where I said, 5649 "In a manner similar to that by which I arrived at the depth at Riverside which corresponded to the 1867 profile, by proposition; taking the watershed above Riverside at 633 square miles and the entire watershed above the mouth of Hickory creek at 924 square miles, the equation is," etc., I assumed the river in state of nature for the purposes of that computation, though, of course, Illinois-Michigan Canal did empty into river in 1883 and 1867. Eliminated that and got back to natural state. I criticised Cooley's tables because they included certain dates between December 1 5650 and April 1. I prepared a table which eliminated all those dates. In my table it shows there was a deficiency of depth in the river. In 1886, included month of December, showing 31 days no discharge. Included December in 5651 1887. In 1889 included months of January, March and December. In 1890, month of December. In a word, for all those years, entire year was considered. If you are investigating water power question in figuring stage of water in given river, it is customary to figure all days in year, but in question of navigation would say no. Think it fair statement that complete report on streams should give stages and discharges for entire year, but that is apart from discussion as to what is available for navigation season. In case of largest streams, though not as to smaller, it is customary for engineers to record the number of dates 5652 corresponding to stages of water and assume that navigator who consults such tables understands well that stages are not consecutive and may be broken. If you say that MacKenzie, in 1887, report of the Comstock Board in which a table of the Upper Mississippi river set out the stages of water in substantially same form as set out in Cooley's table for Desplaines, am willing to accept your statement.

Q. You are not familiar with this table, so as to know that the Comstock Board drew their conclusions from this table in regard to the proper depth for the Hennepin Canal in view of its relation to the Upper Mississippi river?

Objection; incompetent, irrelevant and immaterial; not cross-examination.

Whereupon counsel for the government stated that the 5653 witness had testified that he was long connected with the Hennepin Canal.

The WITNESS. The report was published in the chief engineer's report for 1887. The report was by the Comstock Board and the particular table compiled by Colonel afterwards General, MacKenzie, in conjunction with that report of the Comstock Board on the Illinois river. I have read most of the report, if not all of it, but do not recall just what it says. Do not think it is a fair statement that on the Ohio river stages are commercially utilized whenever they occur, whether short, long, consecutive or otherwise, because at beginning of winter movable dams are lowered and remain so through winter with exception one below the harbor at Pittsburgh, which is maintained to allow for local navigation in Ohio river. There are 11 movable dams on Ohio river; 11 5654 more under construction. Total number will be thirty-nine. They are not built continuously, but at intervals. Improvement extends in measure for whole length of river. They won't secure 9-foot depth at low water until entire system completed. Think first improvements put in Ohio were to procure four foot depth and that in former times, water was so low that sometimes for four months coal fleet was held in Ohio at Pittsburgh waiting for rise of water to get down river. Last year on Upper Mississippi above Des Moines rapids for six months through packets between St. Louis and St. Paul were tied up because of low water. Boats did run locally 5655 between Rock Island, Burlington, etc. In order to be useful for purposes of commerce, it is practically necessary that river should be navigable for consecutive period of considerable length. The case of the Upper Mississippi last year illustrates that point.

A bar formed just above the mouth of the Missouri at 5656 what is known as Maple Island in the early part of July, as I remember it, or just before July, the latter part of June, perhaps, which stopped navigation between St. Louis, and St. Paul. The St. Louis office immediately sent up one of the large hydraulic dredges and made one cut through that bar, but on account of the type of dredge, she had great difficulty in getting back through the cut because the hull was wider than the cut which she made, due to the fact that the material did not flow in, and it was several weeks before a dredge of the dipper type could be brought down from the Upper Mississippi for the purpose of enlarging that channel.

After that time there was no more difficulty on that point, and as far as I know, and I keep in very close touch with the matter because I read the reports for the upper Mississippi every month as they go through my hands—yet as a matter of fact the confidence of the steamboat owners was so shaken by that experience at the beginning of summer, that they did not resume the running of packets between St. Louis and St. Paul.

Boats plying between Burlington and Davenport may have been tied up for a time because of the low water in the Mississippi beginning late in the summer and extending all through the fall. I do not recall whether they were or not.

5657 Q. The purpose of improving a river, Mr. Woerman, like the Mississippi and Ohio and Desplaines would be to make these irregular periods consecutive when there would be navigation upon them.

Objected to because it assumes that there were any periods in the Desplaines of navigation to be improved.

Q. That was the purpose on the Ohio and Mississippi, was it not, Mr. Woerman?

A. That was one of the purposes.

In the report of Post and Paul and Bucklin, and others, between the years 1824 and 1837, I find that the Desplaines river was measured at Laughton's ford and found to have a discharge of 60,000 cubic feet per hour, and the minimum discharge at Cache Island of 117,000 cubic feet per hour, which appears on page 135 of the Canal Commissioners report of 1900.

5658 I do not recall at the present time in these reports any statement that the Desplaines river during that period, 1824 to 1837, ever ran dry. I cannot say that I am familiar with that report.

As to whether these minimum volumes, as shown by the Post and Paul report, and the Bucklin report, are greater than the volume which we now find in the Desplaines river at these points in dry years, would say, I would like to say that while these were the actual measurements that were taken by this survey party at certain times—and this answer is really an answer to the previous question,—I am uncertain as to whether any statement may occur in the report as to there being a less discharge at some other time when the party was not actually making the measurements. And so, at the present time, if it was not for the fact that we have daily discharge readings at Riverside during this period of years, and had to rely entirely on what we find in reports, likely as not we would accept

Mr. Harman's measurements as to the minimum volume. My impression is that if we had gauge readings for this period referred to by Post and Paul, that they would not be dissimilar to those of the latter period. Remember Bucklin's statement on page 135 of Canal Commissioner's Report, "It may be proper to remark here that the fall of 1830 was a season of extraordinary drought." These investigations of 1824, 1830 and 1837 I think were made to determine minimum flow in Desplaines, DuPage, Calumet and other rivers, to determine feasibility of feeding Illinois-Michigan Canal with their waters. Yet those years and months might not have been times when the minimum discharges occurred. August, September and October are months in which lowest water usually occurs. Report, page 135, says with reference to one of these measurements that it was made in season of extreme drought.

You asked me my authority for stating that one of the measurements was about four cubic feet per second.

I found that was given by Cooley in Leveritt's Water Resources of Illinois, 17th Annual Report of the United States Geological Survey, part 2, 1895, page 741. Copy I made reads as follows (reading):

"Professor Cooley reports that at Riverside in 1887, it reached a minimum of 4.27 feet per second; and for five months did not exceed $16\frac{2}{3}$ cubic feet per second. He estimates that for nearly every year the extreme low water flow at Riverside and Joliet reaches about 5 cubic feet per second."

5661 Those words read are verbatim from Leveritt's Water Resources of Illinois.

I have not that report here, I really do not know whether we had it here the other day. I copied this from the copy I have at home. Whereupon it was agreed between counsel that the matter might go in subject to objection unless he could produce the report.

Counsel for the defendant then agreed if he could not produce it now to produce it on the trial. Whereupon counsel for the government asked leave to further cross-examine the witness when the book in question was produced.

My answer to the question asked at transcript page 5649 "Assume the volume that you assumed at Riverside, at 550 cubic feet per second, what would be the corresponding volume at the mouth of Hickory creek, at the mouth of the river, and at Romeo" is as follows: The area of the watershed to Lock-

port is 774 square miles, corresponding discharge, 672 cubic feet per second. Area down to head of Lake Joliet including Hickory creek is 924 square miles, discharge 800 second feet. It is same as gave on direct. Total watershed area is 1358 square miles, corresponding discharge 1180 cubic feet per second. In connection with discussion why Seddon showed 800 second feet flow line at mouth the same as at head of Lake Joliet, is perhaps that at that time condition was as I saw it in fall of 1907; that is, there was no water coming out of DuPage, which constitutes practically entire additional area coming in between these points, and that, for that reason, he just took 800 second feet straight through. Would say that flow of DuPage river had flow that was at least in proportion to rest of watershed. Am not prepared to say it was better sustained, though may have been somewhat better sustained. I am not familiar in detail with the conditions in a state of nature of Jackson's creek and Rock Run, for that reason when you asked me about them the other day I was unable to say I had ever seen them dry because I had not been around them enough during the fall and summer months to know from personal knowledge. In former discussion about Canal Commissioner's Report of 1900, page 135, counsel for defendant directed my attention to passage at page 147 thereof, the same being an extract from a report made December 13, 1838, some eight years after report to which counsel for complainant directed my attention. In the latter passage was a reference as follows:

"The past dry season rendered the measuring of the Desplaines almost unnecessary, since for nearly four months the tightest dam that could be erected would not, at the point for taking out a feeder, have saved water enough to propel a single pair of ordinary millstones."

Do not know how much water it takes to feed a pair of millstones. I read (reading):

"Repeated gaugings from the 20th of July to the 22nd of August, and it was afterwards still lower, gave an average of less than the measurement of 1830."

Q. Assume for the purpose of this question the gauging of 1830 approximately represents the lowest water of Desplaines in state of nature, how did that compare proportionately to lowest water we now find in Desplaines from reading of gauge at Riverside?

Objection; assumption; contrary to record.

A. The gauging of 1830 was 60,000 cubic feet per hour, 1,000 cubic feet per minute. According to your assumption, low water flow would be lower at present time than it 5666 was then. How much is a relative question. 16-2/3 cubic feet per second is so close to nothing could hardly say it was great deal lower. Table introduced showing lower water than 16-2/3 feet per second was your 1830 measurement. Gauge records show there was no flow for many days. 16-2/3 feet per second is so nearly nothing could not say it was great deal lower, though if you take it by proportion, ratio is 16 to zero, an infinite ratio. 11.4 on gauge would represent elevation corresponding to lip of pool, but many gauge readings are lower than that. There are many days 5667 under present gauge readings when water is even lower than lip of pool. Have not recently read engineer's reports on lower Illinois river. I remember the statement in one of them that there was a considerably low water period in which water on bars was less than 16 or 20 inches.

Q. Is it contended in any reports on lower Illinois or testimony in this case that river was consecutively navigable through these low water periods?

Objection; based on wrong assumption of witness' knowledge of all testimony and reports in case.

5668 Whereupon it was pointed out by counsel for the government that the assumption simply refers to reports on the Illinois river.

COUNSEL FOR THE DEFENDANT. But the question also refers to all the testimony in this case. Whereupon the question was amended to meet counsel's objection.

A. I think not, that is for boats such as are used in these days. Whether very shallow draft boats ran consecutively or not, I am not prepared to say.

As to whether I am familiar with river navigation sufficiently so that I know that there are a great number of boats operating on a draft of from two to four feet of water, boats of considerable size and burden, would say, yes, sir; that is the usual draft on western rivers, 3½ to 4½ feet. As to whether there was a number of large boats with a draft of less than 3½, would say that I don't know of any that are loaded. I do not think there are any large steamers that draw less than 2½ feet light, some of the smaller ones, lighter ones, may draw only 2 feet. The lower water period on the lower Illinois has been known to be as long as 150 days. Messrs. Wilson and

Gooding in their report of 1887, stated that the usual 5669 low water period was from 60 to 90 days.

Q. Is it not a fact, Mr. Woerman, that streams which are now navigated by boats have had such periods of low water, the extent of such periods depending in a measure upon the improvements that have been made in those streams?

Objected to as incompetent, irrelevant, immaterial and because the word "such" does not sufficiently indicate the condition to which the question is directed, or on which the contention is based.

COUNSEL FOR GOVERNMENT. In order to meet the objection of counsel will say, "Such rivers as the Ohio, the Mississippi and the lower Illinois." As I have mentioned, for example, you testified that you knew periods of 150 days upon the lower Illinois, and I think you testified yesterday that you knew of similar periods upon the Ohio and Mississippi.

A. Low water is entirely or wholly a relative term and does not indicate depth, and it is true that all alluvial streams have periods of high water and of low water.

5670 Q. And in a great many of them during those periods of low water, navigation is actually interrupted until improvements have been made in the streams, so as to remedy this low water; is not that correct?

A. That is true but not to any such extent as was shown to be the case in the Desplaines river.

(Motion to strike out the latter part of the answer as not responsive to any question.)

COUNSEL FOR GOVERNMENT. In view of the fact that on direct examination of this witness, at 2658 and 2659 (Abst., 1088), Mr. Scott puts the following question: "Now, Mr. Woerman, from your knowledge and investigation of the Desplaines river, and your experience in connection with waterways, are you able to state whether or not the Desplaines river is navigable for the purpose of useful commerce"; I at that point interposed the objection on the ground that no proper foundation had been laid for asking this witness this question. I desire now to add to that objection the following objection; the question is further objected to on the ground that the question involves a question of law for the court as to which the opinions of witnesses are not competent; and further in view of the fact that it is impossible to get any ruling of the court upon this objection at this time, I desire without

waiving that objection, to ask the following question.

5671 Mr. SCOTT. All right.

Mr. CRESSY. Q. Mr. Woerman, is it your contention that by reason of the fact that navigation is interrupted in rivers by periods of low water, such rivers are not therefore navigable streams?

A. As I stated a few moments ago, all of the western rivers have periods of low water as compared with an average or flood flow; and I am also willing to admit that useful commerce may be entirely interrupted for two or three months in the fall, September, October and November; and if the stream was navigable during the months of April, May, June, July and August, I would not say that it was not navigable, because it was interrupted for three months in the late summer or early fall.

But if it was interrupted say in May and then maybe you had enough water for a part of June, and then none in July and August, for example, or not enough for commerce, I would not consider that a navigable stream; particularly where the periods of navigation, as you might call them, were at irregular times. I contend that in order to be of any value it must have some regularity.

As to whether it is a fact, that on some of the streams, these periods when navigation is interrupted, do occur at irregular intervals, and not at regular intervals, would
5672 say that is true in a general way but I know of no stream which is considered navigable which as a matter of fact is not navigated during the months of April, May, June and July. The gauge records show that that is not true of the Desplaines river. It is a fact that even on those streams where I said you have navigation during April, May, June and July, that in some years navigation is interrupted, even in those months, by low water, but that is the exception and not the rule. I would add that as to my statements there, while I said western rivers, I wish to limit it also to western rivers in this latitude. I do not recall making any statement that the extreme low water reported in connection with the so-called profile of 1867 is a proper measure of the availability of this stream for navigation. I think what I did say or meant to say was that the profile of 1867 represented the usual low water flow in a state of nature.

5673 As to whether it represents the extreme low water flow, would say, no, I would not say extreme low water,

although I would say that it was less than the ordinary low water. As to whether it is a fact that in making profiles and measurements such as was done in 1867, the purpose of such profiles and such measurements is to indicate when the stream is not capable of being used by boats and for the purpose of determining what improvements are required to render the stream usable under the extreme conditions of low water, will say, there again, I would not say extreme low water, but the ordinary low water; and by way of illustration I call attention to the fact that in the acts of Congress appropriating money for the improvement of rivers where depths are specified, there is always a clause in the act which states that the depths given are the depths at ordinary low water; not extreme low water. By the ordinary low water as distinguished from extreme low water, I mean the low water which obtained in an average year in the river. I am not familiar with the Trinity river in Texas.

I never found any bench marks that were left by 5674 the survey of 1867 that I say was made. As to whether

I know any soundings were actually made in that survey from anything that appears in the records,—referring now merely to the question of soundings—would reply as I stated the other day I have never seen the note books of that survey. They were probably misplaced on account of the changing of the office perhaps, from Davenport to Chicago. And I am therefore unable to state from 5675 personal knowledge of the records of that survey.

As to whether I am able to say whether or not Palfrey and Griffin did anything more in that survey than to level up the canal bench marks and check the profile made by Preston in 1857, and whether or not the soundings made on that profile of 1867 are not in fact identical with those reported on the Preston survey, would reply to that a question that I would like to read several extracts from the report of General Wilson, and of Assistant Engineer Worrall upon that survey, as given in the report of the Chief of Engineers for 1868.

COUNSEL FOR GOVERNMENT. I would like to have the question answered and then if you care to read any extracts in support of that answer that would be admissible in order to avoid redirect examination.

A. I do think that they did much more than that and in support of that opinion, I would like to read these extracts, that is what I had in mind.

Whereupon the witness proceeded to read from page 438 of that report as follows:

“Having been designated by direction of the Secretary of War, through engineer orders dated Washington, May 8, 1867, as a board ‘to conduct surveys and examinations, and to prepare plans and estimates for a
5676 system of navigation by way of the Illinois river, between the Mississippi and Lake Michigan, adapted to military naval and commercial purposes in accordance with the act of March 2, 1867,’ we have the honor to submit the following report.”

Then at the bottom of that same page, are the following words (reading):

“Accordingly, at as early a date as the season would permit, we organized, under the general authority heretofore cited, three surveying parties, under the immediate supervision of Civil Engineer Assistant James Worrall, for the purposes of making a thorough and exhaustive examination of the entire region lying between the southern and western end of Lake Michigan and La Salle on the Illinois river, and also for the purpose of conducting a low water survey of the river from La Salle to its mouth. To the first of those parties, under Civil Engineer Assistant Engineer George Butler Griffin, and afterwards under Civil Engineer Assistant H. Alppers, was assigned the duty of surveying the line of the canal from Chicago to La Salle, the Des Plaines, and the Illinois rivers, and all the alternate lines which had at any time been spoken of, including that of the Mud Lake.”

Then the first few lines from the paragraph at the bottom of page 439:

“By a careful examination of the report and profiles, of this year’s survey, with the map herewith submitted, it will be seen that the location of the present canal from Bridgeport to the Valley of the Des Plaines, cannot be advantageously or economically changed;”

Page 459, the second, third and fourth paragraphs of Assistant Engineer Worrall’s report, read as follows:

“On the 19th of June last, I placed a party of engineers on the south branch of the Chicago river at Bridgeport, a suburb of Chicago, which party continued in the field until late in November, having entered the valley of the river Des Plaines at a point seven miles

from the place of beginning, and followed the valley of that river, and the Illinois river to the foot of Grand Island, in the last mentioned stream."

5677 Grand Island is fifty miles or more below Peoria.
(Reading):

"On about July 1st I placed another party in the field, which, having carefully examined the head of Lake Michigan, and the waters and water-sheds surrounding it on the southwest, traversed instrumentally the valley of the Kankakee from Momence to its junction with the Illinois, and surveyed, as high up as

5678 Aurora, the valley of the Fox river, a tributary of the Illinois, finished their labors by a careful survey of the valley of the Illinois from the foot of Grand Island, before mentioned, to the river Mississippi.

The country embraced in this survey has been examined before by various authorities, but so large an amount of information has never been heretofore obtained under one surveillance."

On page 461, the second paragraph reads as follows (reading):

"The surveys made by us around the southwestern branch of Lake Michigan settled the question, that through the 'Sag' or the Lemont narrows was the only passage towards the west for Lake Michigan waters flowing by gravity; and this being once settled the remainder of the location of this work becomes inevitable, and must follow the valley of the Des Plaines to its mouth, and thence the valley of the Illinois to the river Mississippi."

On page 466, the second paragraph reads as follows (reading):

"The Calumet feeder was sounded with iron rods from its outlet to the dam at Blue Island. A regular survey was made from Blue Island to Momence, on the Kankakee, and from Momence to the Junction of the Kankakee and the Des Plaines, where the Illinois river is formed. A reconnoissance was made of the upper Kankakee, from Momence, in a northerly direction

5679 along the river into the State of Indiana, say about 30 miles, among the Kankakee marshes, where boats had to be used, there being no foot-holding for the instruments."

Seems to me these excerpts show conclusively General

Wilson and assistants went into subject thoroughly. Spared no pains to get necessary data. If they took no soundings in Desplaines, were certainly convinced that elevations furnished by Preston, if they were so furnished, as has been suggested, were as good as they could secure, in which event immaterial whether elevations of the river bottom were determined by Worrall's party or Preston's.

Counsel for complainant offer in evidence certified 5680 copy of record of annual precipitation at Chicago from 1843 to 1910 inclusive, heretofore referred to in this cross-examination. Whereupon, said document so offered in evidence was marked "Government Exhibit 1 of July 8, 1911."

Whereupon said document so offered in evidence was marked Government Exhibit I, July 8, 1911, and is in words and figures as follows:

GOVERNMENT EXHIBIT I OF JULY 8, 1911.

N. S.

Annual Precipitation at Chicago.

1843 to 1910 inclusive.

Record furnished by Prof. Henry J. Cox,
U. S. Weather Bureau.

Unofficial.	U. S. Official.
1843— 35.50	1871— 35.61
1844— 33.12	1872— 29.07
1845— 32.30	1873— 36.41
1846— 40.00	1874— 28.63
1847— 32.80	1875— 38.06
1848— 44.40	1876— 36.48
1849— 34.20	1877— 41.01
1850— 30.40	1878— 41.95
1851— 38.60	1879— 30.71
1852— 38.80	1880— 37.32
1853— 36.40	1881— 44.18
1854— 24.60	1882— 41.34
1855— 36.30	1883— 45.86
1856— 29.04	1884— 34.61
1857— 39.83	1885— 44.37
1858— 47.10	1886— 26.77
1859— 29.30	1887— 29.13
1860— 36.40	1888— 30.86
1861— 39.30	1889— 34.95
1862— 40.42	1890— 32.69

Unofficial.	
1863—	33.60
1864—	28.40
1865—	40.20
1866—	36.30
1867—	22.41
1868—	36.48
1869—	31.57
1870—	22.92
<hr/>	
Mn's.—	34.66

U. S. Official.	
1891—	26.54
1892—	36.56
1893—	27.47
1894—	27.46
1895—	32.38
1896—	33.14
1897—	25.85
1898—	33.77
1899—	26.49
1900—	28.65
1901—	24.52
1902—	37.57
1903—	28.09
1904—	26.14
1905—	35.36
1906—	30.87
1907—	35.10
1908—	34.83
1909—	43.22
1910—	26.86

Mn's.— 33.52

Average Precipitation for 68 years, 1843 to 1910—33.99.

I hereby certify that the record of annual precipitation in Chicago as shown by the attached sheet to be a true copy taken from the records of the United States Weather Bureau.

(Signed) JOHN H. ARMINGTON,
Local Forecaster,
U. S. Weather Bureau.

Subscribed and sworn to before me this 8th day of June,
A. D. 1911.

(Signed) LULU M. RIDER,
Notary Public in and for Cook
County, Illinois.

(Lulu M. Rider)
(Cook County, Ill.)
(Notary Public)

Q. Mr. Woerman, are you able to ascertain from that 5680 report the amount of money which Mr. Wilson had on hand for the purpose of sending these parties into the field? And in that connection a further question as to whether that amount would have been sufficient to have justified this

extensive work which you stated you had assumed had been done?

COUNSEL FOR DEFENDANT. I object, the witness has not stated that he assumed the extensive work was done, but has read from the report a description of the work that was done.

A. I am unable to find any statement of the cost of the survey or of the appropriation in connection with the report.

Mr. CRESSY. The accuracy, Mr. Woermann, of the work as determined by the later profiles that have been made of the Desplaines river, does not correspond, does it, with the statement in the report as to the work that was done? In other words, if this report had been done with the accuracy that you assume, the discovery would have been made that Lake DuPage did not have a fall of two feet as the profile states, for one thing.

Mr. SCOTT. I object to fixing the accuracy upon the assumption of the witness, whereas, as I stated in the former objection, the witness has read from the report itself.

Mr. CRESSY. I am not asking him to comment upon the report; the report speaks for itself.

5681 A. I think that that report like all other historical works you might say, must be considered in the light of the times; and I admit, as I did the other day, that the degree of accuracy was not as great on that survey as it was on the later ones.

As to the matter of a fall of two feet being shown in Lake DuPage, I am not certain, as I stated the other day, whether that might not be due to some condition there, which was there at that time and which disappeared later; although it is more likely, as I stated the other day, that that is a mistake of the draughtsman in drawing in the line, the man who platted it. I have seen a mistake like that made a number of times in my own office. A man takes a level book and plats a series of points; then he connects them up and he overlooks one point, just as you can see in this case, he may have had a point platted a little further down stream, which really represented the head of Lake DuPage and which he overlooked when he drew in that water line.

As to whether there is anything in that plat to justify any such assumption in the case of Lake DuPage, would say the plat of which we saw the tracing, of course, it was not platted in the tracing, if that is what you mean. The point

might have been overlooked in the platting. As to
5682 whether this survey of 1867 was what is known as an
explorative survey, would say I have never heard or
seen any such title applied to it. As to whether it is a sur-
vey such as usually made for a final project, such as being
in a system of locks and dams in the river, would say he used
it for that very purpose. I have just now referred to the fact
that he ran several other lines for the purpose of determin-
ing, and that he finally asserts in the very extract which I
read that he came to the conclusion that the Desplaines was
the most feasible route of the various routes.

Referring to page 2652 (Abst., 1086) of my examination I
was asked where Mr. Dugan found, as he testified in his ex-
amination, the greatest depth as being 19.6 feet, and I testi-
fied that this depth of 19.6 feet was found on three different
soundings. Then I was asked to give the greatest depth found
on the next section upstream, and I testified 16.1, and so on
until finally I gave a cross-section, the sounding readings as
follows: 3.3, 4.0, 4.1, 6.2, 8.1, 8.4, 7.5 and so on.

5683 As to whether or not it is a fact that that point where
those soundings were made is the point where Lake
Joliet obtains its greatest width, would say that the width
along that line of soundings is 1650 feet, and the width of
the lake at right angles to the shore line is 1400 feet. It is
relatively, in reference to the other widths of Lake Joliet,

5684 in the widest portion of the lake. I testified that the
velocities referred to in my report of 1905 referred to
the condition as it would exist after the improvements con-
templated by that report were made.

As to whether there is anything in the report itself to in-
dicate that, will say nothing perhaps except that it naturally
follows that an investigation of that kind would be made to
determine what the conditions would be in the proposed
waterway, because it was not navigated in a state of nature;
or its present state.

COUNSEL FOR GOVERNMENT. I move to strike that out as not
responsive to the question. I had reference to the report, and
I object to voluntary statements on the record.

The WITNESS (continuing): As to whether as a matter of
fact in that report I used the extreme high water line as it
existed in the condition that I examined it, would say I used
the greatest flood that was recorded for each of these
5685 points. The greatest flood gave the high water line
shown on that profit. If I were computing it for a

changed condition I might, or I might not have shown the high water line in the changed condition; not necessarily.

Q. Do you not state in your report that there was not sufficient data to enable you to compute the velocities at the mouth of the river and at Treat's Island?

Objected to; if he does so state it will appear in the report.

COUNSEL FOR THE GOVERNMENT. I am trying to state the report here. I think that is permissible.

A. I think I do; I do not remember the exact words.

I also make the statement that the velocity will not exceed a certain limit, which occurs at page 41. These two localities to which my attention has just been called, namely the point at the mouth of the river, and at Treat's Island, are what is known as the ruling localities below the head of Lake Joliet.

5686 As to whether it would be fair to assume that in making the statement that the velocities as computed by me referred to the improved conditions; that this statement does not apply to that portion of the river between Dam No. 1 and the head of Lake Joliet; in all other portions of the river it refers to the velocities as they exist at the present time, or as they existed in 1902 or 1905, would reply that I am not prepared to say; I was about to supplement that previous answer by saying that the details of those computations which were made seven years ago are not sufficiently fresh in my mind to enable me to go into detail. In the section of the river between Dam No. 1 and the head of Lake Joliet, I projected a canal, I deepened the river from Dam No. 1 to McDonough street, although I was not to occupy it for the purposes of navigation, so as to carry not only the natural flow but the 10,000 cubic feet per second which the Sanitary District of Chicago proposed to send down without endangering the City of Joliet. As to

5687 whether or not it is a fact that I proposed to occupy a portion of the river bed with this canal and therefore diminish the width of the river as it existed prior to 1902 and 1905 and that to compensate for the lessening of the width, I deepened the river, will say that is exactly what I stated day before yesterday. I planned this so as not to change the flow line from what it was found to exist in a state of nature in its present stage. It would follow that having made a channel both narrower and deeper with the same flood line that the velocity would be thereby increased.

Q. So that the velocity in a state prior to the proposed improvement as to the rapids between Dam No. 1 and the head of Lake Joliet would be less than the amount given in that table, which is seven miles an hour, I think. I will withdraw the seven miles per hour, whatever the table says to be the velocity, the actual velocity which existed would have been less than the amount shown in the table.

A. That was 7.4. I think your statement is true in a measure. I do not think that difference, however, would be very large.

5688 In computing velocities at the points below the head of Lake Joliet, I testified that I used the largest flood on record at each point.

Whereupon counsel for defendant offered in evidence, as previously requested by counsel for complainant, from House Documents, Volume 12, No. 5, report of Secretary of Interior, Volume 4, part 2, Geological Survey, 1896, excerpt from article on Water Recourses of Illinois by Leveritt, at page 741 (reading):

5689 "The drainage area above Riverside is scarcely 1,000 square miles. This gives at the maximum extreme flood of April, 1881, a flow of fully 13.5 second feet per square mile of area. The low water volume is exceedingly small. Professor Cooley reports that at Riverside in 1887, it reached a minimum of 4.27 feet per second, and for five months did not exceed 16-2/3 cubic feet per second. He estimates that for nearly every year the extreme low water at Riverside and Joliet reaches about 5 cubic feet per second."

Then occurs note 3, and the reference is to "The Illinois river in its Relation to Sanitary Engineering, L. E. Cooley, C. E.," page 74.

Then I continue to read:

"The main tributary of the Des Plaines, the DuPage river, as noted by Professor Cooley, drains a more gravelly tract than the DesPlaines, and receives water from springs so that it sustains a larger low water flow than the upper Des Plaines, but its extreme low water flow is still very small; it is estimated by Professor Cooley to not exceed a mean of 50 feet per second in a period of 20 years, and possibly reaches as low as 17 to 20 feet per second in some years. The greater percentage of range of the Des Plaines."

COUNSEL FOR DEFENDANT. That is where the quotation ends. There is given there note 3, which is the same reference to page 74 of the Illinois river and its Relations, and so forth.

5691 On the opening of court at one o'clock, July 8, 1911, the witness, J. W. Woermann, made the following statement:

Mr. Cressy, referring to this table of maximum velocities about which you were asking me this morning, as I stated then, those computations were made about seven years ago and the matter is not fresh in my mind. It is possible that I am mistaken about some of the statements I have made in reference to that. It occurred to me while I was at lunch, and I was going to ask you if I might look up my notes with reference to that, and communicate with you in a letter or through Mr. Scott—or Mr. Scott is going away—

Mr. SCOTT. My office will be here. What do you mean, that after you have examined your notes and—

The WITNESS. And I find, for example, that those are the velocities as the river now is instead of as I have stated, that those are the velocities which occurred after the construction works are in.

5692 Mr. SCOTT. If you have any questions about what I think it is desirable that you look it up and either by letter, if Mr. Cressy will agree to that, or in some other method, the record will be made to conform to the facts.

The WITNESS. I spoke of a letter because I was under the impression that today wound up the testimony, and I thought perhaps that was the only way left to do it.

Mr. CRESSY. The only point is this, if you are going to testify further we might want to cross-examine. It would depend on what your answer was.

Mr. SCOTT. I suggest that you look it up and write us a letter and we will communicate to you, Mr. Cressy, that letter. Then if you want to examine him further you will have the opportunity to do so.

Mr. CRESSY. I am perfectly willing to let the record stand as it now stands. I have cross-examined Mr. Woermann at considerable length on this very point.

The WITNESS. It is because of some of the points you have drawn out, that I am somewhat doubtful about my statement.

Mr. SCOTT. Mr. Woermann, there is no question about the

right of a witness at any time if he sees he has made a mistake, to correct his testimony. Any witness who has given a deposition may do that, and it is open to you to make any investigations you please and report the results of them and you will have an opportunity to do that.

5693 The WITNESS. I shall do that as soon as I can.

Mr. CRESSY. I have no objection, only I want to have the right to cross-examine further if desired.

Mr. SCOTT. Yes, of course.

The WITNESS. (continuing): At transcript page 2628 (Abst., 1079) I testified it was not possible to produce an open river navigation from Desplaines river of a depth of $4\frac{1}{2}$ feet with the volume of water that has prevailed in that stream since the opening of the drainage canal in January, 1901. At transcript page 2630 remarked that all government reports recognize only way to secure navigable channel at these points is by lateral canal or by slack water navigation. No project prior to my report of 1915 considered a supply of water from Lake Michigan, other than
5694 that necessary for lockage purposes. Earlier reports considered depth as low as 4 or $4\frac{1}{2}$ feet; one estimate for six foot depth. Law governing 1905 project, except as to stretch between La Salle and Ottawa, where they were allowed to consider less depth, limited Board to consideration of fourteen foot depth. It was not on account of the fourteen foot requirement that I used lateral canals at Joliet, and Marseilles. I used locks and dams all way down river, dividing it into levels except at those two places. Lateral canals were required there because of excessive currents. Provided that dams in river would be down in time of flood. I doubt very much that that would make open river navigation. Think there would be no
5695 navigation. With respect to boats of high speed, velocities would not be prohibitive, except at Joliet rapids and Marseilles even in time of flood.

Q. Do you wish to be understood as saying that it is impossible to produce navigable depth of $4\frac{1}{2}$ feet by means of open channel, and the volume of water that has prevailed since January, 1900, through Desplaines river between Dam No. 1 and mouth by means of improvements?

Objection; incompetent, irrelevant and immaterial; not cross-examination.

5696 At transcript 1502 and 1503 (Abst., 638), question you asked Mr. Cooley was based actually on flow of 5,000

second feet. If question to me limited to that basis, will say no. Flow since drainage canal opened very irregular. I am satisfied it has been much larger than that a good deal of time, although not so officially reported. Assuming 5,000 feet it is not possible. Have examined profile along thalweg of stream and slopes at various points where they occur in stretch between Dam No. 1 and mouth of river.

Q. Is there anything mysterious about lowering of river bed and effect of such lowering on pools above, that has not been considered and well understood by expert engineers ever since the river improvement was undertaken by the United States?

Objection; incompetent, irrelevant and immaterial.

5697 A. Results show that it was not understood.

Given the volume of water, the outline of stream bed, elevation of water at various slopes and other points along stream and widths, it is not possible to satisfactorily calculate the effect that cutting through the slopes will produce on upper level. For example, Sanitary District computed channel to carry 10,000 cubic feet per second. They got one that carries 14,000. Channel was practically uniform in width and depth. When taking one irregular in curvature and depth and slopes, and with various kinds of obstructions on bottom, your uncertainties and difficulties are multiplied many times. I have seen it stated in reports and have had it stated to me verbally that it was the intention of Sanitary District to design channel for 10,000 cubic feet per second. That
5698 statement is contained in paper Sherman, Assistant Engineer in charge of Calumet channel, recently on Evanston Ditch, read before Illinois Society of Engineers. Had talk with him on subject afterwards.

As to whether I know the gentleman who actually computed the channel for the Sanitary District prior to its construction, would say I presume Mr. Cooley had charge of it.

As to whether Mr. Sherman did not have anything to do with that, would say I really don't know. Lake Joliet is at head of Treats' Island. Would not say rapids at mouth of river and at Treat's Island are just below very long
5699 and deep pools. Long is a relative term. I would not say they were very long. Lake Joliet about five miles long; Lake DuPage about three. Know approximately depth of these pools. Assume you lowered Lake Joliet a few inches, you would lengthen Joliet rapids. Lengthening depending on how much you lowered it. Do not know what Cooley's pro-

ject is for securing 4½ feet. Same thing true of lower rapids at mouth. If you lower Lake DuPage you lower rapids at Smith's bridge, which lowers pool above mouth of Jackson's Creek, which again lengthens rapids, at Treat's Island so you have endless chain.

Q. How does the lowering of the pool of Lake DuPage lower the pool just below Treat's Island?
5700 (Objected to.)

COUNSEL FOR GOVERNMENT. You specifically stated that you lengthen the rapids at Smith's Bridge. How does the lengthening of the rapids at Smith's bridge lower the pool above Smith's bridge? That is specifically what he did say.

COUNSEL FOR THE DEFENDANT. He said that the lowering of Lake DuPage would lengthen the rapids at Smith's bridge.

COUNSEL FOR GOVERNMENT. And he said that in turn would lower the pool above Smith's bridge. You are in error there are you not?

A. That is my off hand judgment about it. Rapids are affected by the pool that is below them. They are lengthened; if you lower a pool below the rapid, you lengthen the rapid.

As to whether that determines the amount of water flowing over the rapids, or the depth of the rapids, it has its effect, which is to increase the velocity and lower the water surface. As to whether it is a fact that whatever you may do to a pool below the rapids will have no effect upon
5701 the amount of water which flows through that rapids, would say it certainly will have no effect upon the amount of water.

Q. If it has no effect upon the amount of water and nothing is done in the rapids itself to affect the declivity, what effect will result on the pool above merely by work lower down the stream?

A. But you started out with the proposition of deepening these rapids. The whole scheme is based on that statement.

Q. But just answer my question; you attempted to throw in here a volunteer statement to the effect that you would have an endless chain, and I picked you up on that statement in which you endeavor to show an endless chain.

A. Yes, sir.

Q. And you said that the lowering of the level of Lake DuPage would lengthen the rapids at Smith's bridge and that in turn would lower the level of the pool at Jackson's Creek.

And I am now endeavoring to point out to you the particular points in the chain to see if you are not in error, on the assumption that there was no change proposed on the rapids.

5702 A. Well, but I will take into account your first proposition that you did propose to change the rapids.

Q. Suppose we leave that out; suppose no change was made upon the rapids at Smith's bridge; would the lowering of Lake DuPage have any effect upon the pool at Jackson's Creek?

A. I think it would. As I stated a moment ago, your rapids would be lengthened at the bottom, but just like coming down a long hill with an auto or a wagon; the more stretch you have got there the more impetus you gain, and the greater your velocity the less your depth.

As to whether that would tend to show that you would take less water at the top of the lake than you did previously, if you have a less depth at the top or lip of the pool above, will say if you eliminate the deepening of the rapids I presume that is correct. But I was unable to follow, or at least did not follow, your variations of deepening the rapids one moment and not deepening them in the next question.

Q. If you improve the rapids at Smith's Bridge, then you might lower the level of the pool at Jackson's creek; that is correct, is it not?

5703 A. Mr. Cressy, if you will allow me, I think we may save a lot of time here.

Q. Well, just answer my question.

A. It does not matter how long you may cross-examine me on this proposition of getting 4 feet and a half in the Desplaines river; with these slopes and that volume you are not going to change my position on that point. I have worked on projects for open river improvements too long.

Mr. CRESSY. I move to strike all this out.

A. I have studied too many reports and estimates on that subject to be influenced by any cross-examination that you may make along theoretical lines on this subject.

Mr. CRESSY. I move to strike out this volunteered statement on the part of the witness as showing an element of hostility on his part as to affording counsel for the government a chance to examine into the basis of his statements made upon direct examination. We are now dealing, Mr. Woerman, with a theoretical problem.

A. Decidedly so.

Q. It is a problem which engineers have had to consider in times past in reference to the Ohio river and in reference to the Mississippi river, and all of our great river systems; is not that correct?

A. And you cannot point—

Q. Just answer my question.

A. No, sir; not with those slopes, nor can you point one out.

5704 As to whether the rapids on the Snake river where counsel says the rapids are even greater there than on the Desplaines have been improved by the government, will say no I am not sufficiently familiar with the Snake river to say what they have done there.

As to whether it has been done on the Missouri river and on the Columbia river, for example, on the Missouri river between Fort Benton and Carroll, particularly at Cows' Island rapids, and Sister Island rapids, would say I do not think there are any such slopes below Fort Benton; and above Fort Benton as far as I know there is no navigation. That is, there was none in a state of nature; there may have been with these big dams that have been built in the last fifteen years. There wasn't any there at the time of the survey I was engaged on. I found slopes on those rapids between 4 and 5705 8 feet to the mile and steeper, but we had to use a rope to let our quarter boat down. That was above Fort Benton. Did not survey below Fort Benton. Recently read reports submitting a plan for improving that stretch of river known as "Rocky" portion, giving depths, slopes, etc. Recall no such slopes on that portion of it. Average slope on Missouri is about .8 of a foot per mile below rocky portion. More than that on rocky portion, but to best of my knowledge, nothing like Desplaines slopes. There may be short stretches above or below Fort Benton on Missouri where there is four feet to mile. I do not think there are any where there is as much as eight feet to the mile. Do not know that slopes 5706 from 8 to 12 feet per mile have been improved and are navigated on Snake river. Am not familiar with that.

I know this, that Snake river volume is very large as compared with that of Desplaines. They are not in same class. Snake river's ordinary flow much larger than 5,000 second feet. Possibly at times it gets that low. As to whether it is a question of degree as to the amount of wing dams and other engineering works that you put into a river, as to whether or not it is possible to improve that river to a depth of 4½ feet

given a volume of 5,000 feet or more, will say, now you are interjecting into the question the subject of wing dams, an element about which Cooley said nothing. Would admit that if you have unlimited funds and can lengthen river sufficiently to spread out fall uniformly, or nearly so, over whole length and make it narrow enough, you can secure $4\frac{1}{2}$ feet.

5707 Is it not possible, Mr. Woermann, on a slope between four and eight feet to the mile, to produce a channel four and a half feet deep, by contracting works and smoothing out the bottom of the channel?

A. I would say in the first place that the slopes which you continue to talk about, four to eight feet, are not the maximum slopes on the Desplaines river.

Mr. CRESSY. I move to strike out as not having anything to do with the question before you.

Mr. SCOTT. Go ahead with your answer.

Mr. CRESSY. The question is purely a theoretical question. It is not necessary to make any remarks of that sort.

Mr. SCOTT. Proceed with your answer.

A. Read the question again, Mr. Satterlee.

(Question read.)

Mr. SCOTT. That is objected to on the ground that it is now assuming a state not of nature but of improvement by dams, wing dams or otherwise; and is incompetent, immaterial and irrelevant.

5708 COUNSEL FOR GOVERNMENT. What I meant by contracting work is what they call regulating work.

A. Those are wing dams.

COUNSEL FOR DEFENDANT. It is further objected to on the ground that it does not involve the necessary elements, and does not assume any particular flow of the river.

COUNSEL FOR GOVERNMENT. Assume a flow of 5,000 feet for the purpose of answering this particular question.

A. Theoretically, according to Kutter's formula, you could, but it has been found when you actually come to carry out improvements based on Kutter's formula in natural stream, actual results are not according to theoretical results. That is matter of degree. Kutter's formula is probably used more than any other. As to whether slopes which are steeper than 4 to 8 feet to the mile consist of very short stretches or knobs, would say the stretches that are steeper than 8 feet to

5709 mile; there is Joliet rapids, over three miles long. When you applied 3 miles to Lake DuPage you called it long. According to 1883 profile fall from Dam No. 1 to

head of Lake Joliet, assuming Dam No. 2 and Adam's Dam are removed, would be about 22 feet in three miles. Less than 8 feet to mile for whole stretch. Slope on my profile at that point 22 feet in same distance. That is the low water of 1901.

Whereupon, at request of complainant's counsel, witness read from the report entitled "Report of Mr. George Y. Wisner, Chicago, February 23, 1884," appearing in the 5710 pamphlet entitled "Letter from the Secretary of War transmitting in obedience to the law reports of surveys of the Illinois, La Salle and Sangamon rivers, which also appears at page 960 of report of the chief of engineers for the year 1883 (reading):

"Water gauges were established at ten different points between Joliet and La Salle and careful readings made of the height of water surface for each day during the period occupied in making survey. The zeros of these gauges were connected with each other by the line of levels, and also with all the high and low water marks to be found along the valley.

The profile of the river bed was determined by sounding cross-sections about 500 feet apart, except in the deep water pools, throughout the entire distance.

"These soundings were all reduced to the depth corresponding to extreme low water, by subtracting the height of the water surface above the low water slope, 5711 as determined by the gauge readings on the date of sounding."

Referring to House Document 263, Report on Fourteen Foot Waterway, I have gauge readings at Morris for certain years. In 1887 have reading of low water of 486.53, Memphis datum. There is no gauge reading; can compute it. For 1893 it would be 486.22. The elevation of the gauge was changed between those two periods. In 1897 get a reading for 9 weeks of 486.55. Referring to my profile in 5712 1905, the reading of low water in 1883 at Morris is 486.7, Memphis datum.

Whereupon counsel for complainant read a quotation from "Lakes to Gulf Waterway," by L. E. Cooley, 1890, page 49 (reading):

"Mr. Claypool's record begins in 1834 and has been continued to date by noting well defined elevations which have since been referred to low water. This low water has been carefully assigned as three-tenths feet above low water of 1887 by record of the Drainage Commission,

which was within two or three inches of the lowest since the bridge was built in 1856."

5713 Morris is about 10 miles below mouth of Desplaines,

The readings referred to are lowest that occur on the gauge at Morris, as shown by me in my report of 1905. Gauge records were all prior to opening of drainage canal. Think Seddon's low water line of 800 feet based primarily on gauge at mouth of Jackson's creek.

5714 To indicate that, he plats that gauge not only on profile he prepared for United States but on one prepared for Sanitary District. He shows that gauge right on flow line. That might be called an interference. Referring to Cooley Exhibit 3, I base my statement that low water line on that profile is probably derived from Seddon because, under word "authority" he says that the flow lines are from diagrams prepared by Seddon for Sanitary District of Chicago in 1901, 1902. I read whole paragraph under title "Au-

5715 thorities" (reading):

"At the bottom and low water line from survey of 1883 as reported by Captain W. L. Marshall, in 1889. The data have been compared with that of the U. S. surveys of 1899-1900, and of 1902-1904, and reduced to the final precise levels of the last survey. The level lines are from diagrams prepared by James A. Seddon for the Sanitary District of Chicago in 1901-1902. Then following a wide blue line, the sentence "characteristic low water stage since opening of sanitary canal on January 17, 1900."

As to whether that authority shows that the discrepancies I have discovered in comparing Mr. Cooley's profile with my copy of Seddon's profile are due to the fact that Mr. Cooley corrected his map to comply with the various surveys that had been made from 1883 to date, would say I was not basing any statement in regard to Mr. Cooley's profile on a comparison simply with Mr. Seddon's. I went back to the original soundings as given in the report of Captain Marshall.

Q. Does not Mr. Cooley on his profile there state that that is the low water of 1883 and that it is not Mr. Seddon's flow line of 800 feet?

Mr. Scorr. Objected to because what he states has just been read into the record.

5716 A. So far as I have been able to determine from a comparison of these profiles which you referred to, namely, the one accompanying the Marshall report and the one

prepared by Mr. Seddon, and the one prepared by Mr. Cooley and the one prepared under my direction, they are all practically the same. That is, the elevations of the pools are the same. Of course on the rapids is where they differ. I did attempt to check up Mr. Cooley's profile with the special survey of Captain Marshall, of Treat's Island. I made a tabulation one day showing what the elevations of the pools were on these different profiles, and that is the conclusion I came to.

As to whether Captain Marshall's elevations have been corrected, with the latest surveys so that they would differ from what appears in the map of 1890, and as to whether the elevations are slightly different when corrected up with the latest surveys, would say if when you say Captain Marshall's elevations have been corrected, you mean Mr. Cooley states that he corrected them on his profile;

I took that into account. As to whether Mr.
5717 Cooley does not use Mr. Seddon's low water line, would say I think the elevations of the pools are substantially the same, barring slight differences that might come in the platting. I have not made a careful study of the
5718 hydraulic conditions that prevailed in the flood of 1892.

As to whether I have made a study of the conditions that prevailed over the portage swamp region, would say I have endeavored to find some data on that subject but was unsuccessful. I saw what Mr. Cooley gave in the direct but I did not consider that complete enough to base any careful computations on. As to whether I made any careful study so that I would wish to take issue with Mr. Cooley on the correctness of his findings, namely, the conclusions made by Mr. Parry on Parry Exhibit 2, referred to on direct examination, showing what the depth was over the divide in a state of nature, in speaking about the hydraulic conditions as they were in 1892, would say that the hydraulic conditions were quite different in 1892 from what they were in a state of nature. Just what the conditions were, I do not think anybody knows. I can say there was a difference because I know that locality well enough to know there was a great deal of difference. As to whether Mr. Parry in the flood line which he attempted to indicate showed what he called a probable flood line as
5719 it would have existed in a state of nature, would say he showed what he called a probable flood line. It is a fact, that you can navigate the Desplaines down stream in a skiff from Dam No. 1 to the mouth of the river. As a matter of fact I have twice done it, down stream. As to whether it is a

fact that a great many other people besides myself have done the same thing, if they have I have not heard of it. It is possible for them to have done it. Dam No. 1 was placed there by consent of state authorities and Illinois-Michigan Canal Commissioners.

Q. Do you know as to the volume of water that is allowed the Sanitary District by Federal permission?

Objection; statute is best authority.

A. Yes, sir. Sanitary District was obliged by its 5720 charter to turn into Sanitary District channel under state law 20,000 cubic feet per minute for each 100,000 population in Sanitary District. At present time amounts to something over 400,000 cubic feet per minute. District is permitted to use 250,000 cubic feet per minute, or $4,166\frac{2}{3}$ feet per second provided current does not exceed one and a quarter miles an hour in Chicago river. Permit based partly on fact that Chicago is so narrow that greater current is dangerous and partly on fact that amount of water from Lake Michigan should be limited as to quantity. Low water line of 1901 does not take into account flow of $4,166\frac{2}{3}$ feet. Quantity at that time not so much. Think it fluctuated between 175,000 and 225,000 cubic feet per minute. Low 5721 water line of 1901 corresponds to something like flow of 3,300 cubic feet per second at Jackson's creek. Said low water profile of 1901 would not be proper profile to show low water of Desplaines for last eleven years. Have stated flow has been considerably in excess of 5,000 cubic feet at times. Upon request of counsel for the government I read from Inland Waterways Commission, page 35 (reading):

"The accompanying table is a summary of the tables which follow on the navigable streams of the United States. The streams included are those which have been the objects of government improvement and are now in active use more or less directly under the corps of engineers of the United States Army, together with streams forming parts of state systems of public works. The mileage can only be considered as approximate, since complete official records are not available. Sections of rivers that might be rendered navigable are not included, nor streams that are practically abandoned for navigation purposes. No rivers, tributary to the Great Lakes have been included."

Believe stated Illinois river between Ottawa and La Salle was navigable. Actually navigated year or two ago. If there

was canal along Marseilles rapids, it is probably correct that boats could go to mouth of Desplaines in low water with same facility that they reached La Salle before improvement of lower Illinois, with increased flow from Sanitary District. Could probably navigate that part of river as easily as lower part of Illinois in its natural condition. By navigable stream

I mean one which was or could be used for purpose of 5724 carrying on useful commerce in way in which it is usually carried on. As to what depth of water would consider necessary for navigation, supposing I had width, slope and other conditions sufficient to justify it, think no general answer can be given to that. As to what would be a minimum depth on which useful commerce could be carried on would say

that a river that had less than foot of water in it would 5725 not be a navigable stream today. If other conditions were favorable river having more than a foot of water could be navigated for purposes of useful commerce. Not absolutely necessary that river should be absolutely free from snags and boulders. If the river had fall in it which is absolutely impossible to navigate, but had stretches above and below with sufficient water, whether or not would consider that a non-navigable river because of that fall would depend upon proportion of unnavigable falls or rapids as compared with portions navigable. A stream might have a fall in it and if it had sufficient stretches of navigable water above and below that fall, it might still be considered a navigable river according to my definition. The fact that a river was a connecting link between two large systems of navigable water would have bearing on question as to whether a small stream having sufficient volume at certain times of year to operate boats on was navigable stream or not would depend on length

of the certain river. Recall no official documents de- 5726 scribing Desplaines between Dam No. 1 and mouth as a non-navigable river, nor do I recall any which calls it a navigable river. Some eight or ten reports have been rendered on Desplaines, as to what is necessary to improve it, though I think word "improve" not used in the connection, in those reports, that you refer to. For instance, my own report says:

"The Act of Congress states that the Secretary of War shall appoint a Board of Engineers to make surveys, examinations, investigations and so forth, to determine the feasibility of and to prepare a report, plans

and estimates of cost of a navigable waterway, 14 feet in depth from Lockport, Illinois to St. Louis, Missouri."

COUNSEL FOR COMPLAINANT. I read into evidence from report of Wright, appearing in report of the Canal Commissioners of 1900, page 174 (reading):

"The Desplaines was not in a proper situation to gauge, as there had been copious rains; I therefore take the former measurements of the United States engineers, as stated in the reports of the canal committee, at 54,800 cubic feet per hour."

This particular report is dated October 23, 1837. Reading now from page 175 of the same report, and in this connection I will say that if we do not read sufficient you can ask us to read additional portions (reading):

"If we admit that an ample supply can be obtained from this source, we ought, before adopting the plan, to look at the consequences of taking the water of Fox river, and what would be the effect of throwing so much water into the bed of the Desplaines. Would it not prevent the several large tracts of low (very low) prairie land from being drained and brought under cultivation? If I have been correctly informed, this would be the effect, and this is of very great moment, not only in preventing this land from being cultivated, but endangering the health of the people in the surrounding country."

I also read from page 180 of Canal Commissioners' Report of Wright, dated October 25, 1837, the following (reading):

5728 "The value of the water power at Lockport will be in demand as soon as the water is in the canal, and to prevent breaking the bank to take out water, I would advise that a water cement wall be built, with the stone excavated from the canal founded on the rock, and carried up with a batter of one inch to the foot; and at every 60 or 80 or 100 feet I would insert a cast iron frame of various sizes, say some of 24 inches square, 20, 18, 12 or any other size I suppose would be required, and these being placed at two feet or more above the bottom of the canal, and masonry extended between 10 and 20 feet as you please, and a gate fitted to each. I should do the same thing at Juliet, where, if I have not mistaken the information obtained, the State holds control of all the water power on the river. This will permit you to sell water power at any point and in such quantities as may be wanted, and the purchaser has nothing to do but

erect his building and introduce his water, and you will sell the water by the inch as is customary."

5729 COUNSEL FOR COMPLAINANT. We offer in evidence this table as to duration of ice at Chicago, Illinois, table No. 21, at page 207 of report of U. S. Deep Waterways Commission, Washington, Government Printing Office, 1897.

Objection; incompetent, irrelevant and immaterial.

(Paper so offered and identified, is in words and figures following, to wit):

No. 21—Chicago, Ill.

(41 degrees 53 minutes latitude north. Altitude, feet.
87 degrees and 37 minutes longitude west.)

Year.	Opened.	Closed.
1847	.....	Open
1848	Open	Nov. 27
1849	May 12	Dec. 22
1850	.....	.....
1851	.....	.....
5730 1852	.....	Open
1853	Open	.....
1854	.....	.....
1855	.....	Dec. 6
1856	Mar. 20	Dec. 1
1857 {	Feb. 18	.....
1858 {	.....	Feb. 15
1858	Mar. 15	Open
1859	Open	Dec. 20
1860	Feb. 26	Dec. 3
1861	Mar. 1	.....
1862	.....	Dec. 2
1863	Feb. 1	.....
1864	Feb. 8	.....
1865	Mar. 17	.....
1866	.....	.....
1867	.....	Dec. 26
1868	Mar. 4	Nov. 20
1869	Jan. 10)	
	Mar. 22)	Feb. 8
1870	.....	Dec. 1
1872	.....	Dec. 18
1872	Mar. 18)	Dec. 9

Year.	Opened.	Closed.
5731 1873	(Mar. 9)	Dec. 1
1874	Jan. 10	Nov. 20
1875	Apr. 20	Open
1876	Open	Nov. 26
1877	Mar. 20	Open
1878	Open	Dec. 1
1879	(Feb. 1)	Open
1880	Open	Nov. 14
1881	April 2	Open
1882	Open	(Nov. 30)
1883	Feb. 13	(Dec. 19)
1884	Feb. 16	(Dec. 12)
1885	Feb. 17	(Jan. 15 Dec. 24)
1886	Mar. 21	Dec. 1
1887 }	Feb. 9	.....
1888 }	.....	Feb. 8
1888	Feb. 18	Open
1889	Open	Open
1890	Open	(Open)
1891 }	(Open)	.....
1892 }	.....	Jan. 9
1892	(Jan. 27)	Dec. 26
5732 1893 }	(Feb. 28)	.....
1894 }	.....	Feb. 12
1894	Mar. 3	Dec. 27
1895 }	Feb. 24	.....
1896 }	.....	Jan. 4
1896	Mar. 1	.....

5732 Average date of opening, February 27; average date of closing, January 7; average number of days closed, 51.

Authorities: Mr. Ossian Guthrie, Mr. John S. Sargent, Messrs. Piper & Co.

Note.—Compared with Seneca, Illinois, for interpolation for twenty years' period. The above dates are for ice closing on streams in the near vicinity of Chicago."

5733 Mr. CRESSY. So that we may have no misunderstanding about it, Mr. Scott, I would like to ask Mr. Cooley a question about this. Have you any objection.

Mr. SCOTT. No.

(Witness temporarily withdrawn.)

LYMAN E. COOLEY, witness for Government, resumed stand and further testified as follows:

Direct Examination by Mr. Cressy.

Q. Mr. Cooley, look at this table which I now show you and state if this table was prepared under your direction as a member of this United States Deep Waterways Commission?

A. It was.

Q. To what does the table given on page 207, labeled No. 21, Chicago, Illinois, refer to, as to the duration of ice on what?

A. Streams in the vicinity of Chicago.

Whereupon the witness J. W. WOERMANN resumed the stand:

5734 COUNSEL FOR DEFENDANT. I want to introduce portions of a report on "The Influences of Forests on Climate and on Floods, contained in a document headed "House of Representatives, United States Committee on Agriculture—A Report on 'The Influence of Forests on Climate and on Floods,' by Willis L. Moore, LL. D., Sc. D. Chief of the U. S. Weather Bureau.—Note. When Professor Willis L. Moore was before the Committee on Agriculture of the House of Representatives in 1909, to explain the estimates for the Weather Bureau, a discussion arose as to the influence of forests on climate and on the run-off water. Professor Moore stated that he was then making some studies on the subject which might lead to some definite conclusions, and he was requested by the chairman of the Committee to continue these studies and make a report when they were concluded. This has been done, and the report submitted by Professor Moore, which follows, is printed by direction of the Committee.

Washington Government Printing Office, 1910."

I read from what is page 3 of the pamphlet (reading):

"One of the most important problems before the American people today is the protection of their natural resources against either the greed of those who would

monopolize them for their own individual benefit or those who, while well meaning, would through ignorance
5735 destroy our heritage and leave posterity poor.

In the discussion of matters concerned with the conservation of the natural resources of the nation, some of which may involve the expenditure of hundreds of millions of dollars and the employment for years to come of thousands of public officials, a consideration of the relation of forests to climate, floods and low water is vitally important.

While much has been written on this subject, but little of it has emanated from meteorologists or from those in the public service who have been actively engaged in the forecasting of river stages, both of high and of low water. In the prosecution of such duty these officials have become acquainted with the physical facts involved in the problem and are therefore well fitted to speak on the relation of such facts to stream flow.

THE AUTHOR ACKNOWLEDGES A CHANGE OF OPINION.

It has frequently been stated that forests control the flow of streams, both in high water stages and in low water stages, and that the climate is so materially affected by the cutting away of the forests that droughts have largely increased and that the well-being of future generations is seriously menaced. It is my purpose to
5736 present facts and figures that do not support these views, some of which, especially those that pertain to the flow of streams, were held by me up to a few years ago—until a careful study of our own and other records and of the incidents of history caused me to modify my opinions. I shall endeavor not to be dogmatic, but rather to present the reasons for the conclusions that I now entertain, with, so far as may be, statistical and historical evidence to sustain them. And I reserve the right to change or still further modify my views if the presentation of new facts and figures render such a course logical, and do not consider that I shall stultify myself in so doing."

COUNSEL FOR DEFENDANT. Also I read from page 8, as follows (reading):

"Professor Abbe further says:

If gauges are raised up year by year, the deficit increases; if gauges in open fields become surrounded by growing trees or higher buildings, the deficit increases.

The climate has not changed, but the errors of the record have done so. Those who wish to restore the good old times before the forests were cut down, when rain and snow came plentifully and regularly, have only to lower and shelter their rain gauges and snow gauges, and, presto, the climate has changed to correspond.

5737 When rain is falling on a forested region, about 25 per cent. is temporarily held far above the ground on the leaves and branches of the trees. In this minutely divided condition, exposed to the action of the wind, the drops evaporate freely, so that the forest atmosphere becomes saturated and decidedly less moisture reaches the ground to be absorbed in the forest humus than on an equal volume of soil outside the forest. A special climate is therefore maintained within a forested area. The temperature is lowered and the relative humidity is increased, but there is no evidence that this local forest climate extends outside the forest or affects exterior conditions to any important extent. Of course, the climate under a tree or a tent or within a house differs from that outside, but these are local matters quite foreign to the broad question, Do forests affect climate?

The climate within a house is not the climate of the whole city, nor is the climate of a ravine that of the surrounding fields. One thermometer or rain gauge in the open air does not give the climate of a State or water shed. The various and restricted uses of the word 'climate' have led to our confusion."

COUNSEL FOR DEFENDANT. I read next from page 16 (reading):

5738 "On the whole it is probable that forests have little to do with the height of floods in main tributaries and principal streams, since they occur only as the result of extensive and heavy rains, after the ground is everywhere saturated, or when heavy warm rains come on the top of deep snows."

Also from pages 33 and 34, I read the following (reading):

"I believe that the reader will acknowledge that I have shown in the several preceding paragraphs that the average discharge of the Ohio River, where I presume deforestation has been as great as in any other part of the country during recent time, has not changed for a period of thirty-eight years, except as caused by

precipitation. It will now be interesting to know how the two periods compare with regard to extremely high water and extremely low water, and this will be discussed in the coming pages.

5739 High water and low water on the rivers of the Ohio basin.—I had Prof. H. C. Frankenfeld, Chief of the River and Flood Division of the Weather Bureau, compile the data from one station on the Cumberland, three on the Tennessee, and five on the Ohio, and establish the average high water for the four wet months, January to April, and the average low water for the four dry months, July to October. He then took the departure from the normal, both for the precipitation and for the height of the rivers, and found that the average high water was no higher and the average low water was no lower for the last half of the period than for the first half. The differences were so slight as to be inappreciable, but what changes occurred were in favor of the low water being slightly higher and the flood waters slightly less. There were variations in the periods and intensities of floods that bear a direct and proper relation to the precipitation. In making his report, Professor Frankenfeld points to the fact that the low water stages at Pittsburg, Pa., and Nashville, Tenn., are not fairly comparable with those of the other stations on account of permanent pool stages caused by dams operated during the low water season for purposes of navigation. The first dam below Pittsburg was placed in operation in 1885, and that at Nashville in 1904. The effect of these dams is to furnish higher low water stages than would result without them. The effect upon the normal low water stage at Nashville was not marked, but at Pittsburgh it was perceptible. However, in his conclusions he did not make allowance for the slightly higher low water stages at Pittsburg on account of the dam, but when included with the other stages of the river this defect probably is not apparent.

According to our line of reasoning, which we believe to be fair and conservative, it is shown that the average discharge of the Ohio River is not greater as the result of deforestation during the last nineteen years than during the preceding like period, and that the average high water in the rivers of the entire basin, which in-

cludes the Tennessee, the Cumberland, and the Ohio, is not higher and the low water is not lower."

5740 COUNSEL FOR DEFENDANT. I also offer in evidence the following extract which appears on pages 37 to 38 (reading):

"Conclusions.

(1) Any marked climatic changes that may have taken place are of wide extent, and not local, are appreciable only when measured in geologic periods, and evidence is strong that the cutting away of the forests has had nothing to do with the creating or the augmenting of droughts in any part of the world.

(2) Precipitation controls forestation, but forestation has little or no effect upon precipitation.

(3) Any local modification of temperature and humidity caused by the presence or absence of forest covering, the building of villages and cities, etc., could not extend upward more than a few hundred feet, and in this stratum of air saturation rarely occurs, even during rainfall, whereas precipitation is the result of conditions that exist at such altitudes as not to be controlled or affected by the small thermal irregularities of the surface air.

(4) During the period of accurate observations, the amount of precipitation has not increased or decreased to an extent worthy of consideration.

5741 (5) Floods are caused by excessive precipitation and the source of the precipitation over the central and eastern portions of the United States is the vapor borne by the warm southerly winds from the Gulf of Mexico and the adjacent ocean into the interior of the country, but little from the Pacific Ocean crossing the Rocky Mountains.

(6) Compared with the total area of a given watershed, that of the headwaters is usually small, and, except locally in mountain streams, their run-off would not be sufficient to cause floods, even if deforestation allowed a greater and quicker run-off. Granting for the sake of argument that deforestation might be responsible for general floods over a watershed, it would be necessary, in order to prevent them, to reforest the lower levels with their vastly greater areas, an impossibility unless valuable agricultural lands are to be abandoned as food-producing areas.

(7) The run-off of our rivers is not materially affected by any other factor than the precipitation.

(8) The high waters are not higher, and the low waters are not lower than formerly, in fact, there appears to be a tendency in late years toward a slightly better low later flow in summer.

(9) Floods are not of greater frequency and longer duration than formerly."

COUNSEL FOR COMPLAINANT. Objection; incompetent, irrelevant and immaterial; do not refer to specific conditions existing on Desplaines watershed. Witness not present for cross-examination.

J. W. WOERMANN:

Cross-Examination by Mr. Cressy (Continued).

5742 Have located some of the references in the abstract of the State case which were the basis of my statements on Woermann Exhibit 1 as to the construction and destruction of obstructions at one time or another in Desplaines

5743 river. On page 617, abstract of State case, John McGowan states there was dam on each side of Treat's Island in 1835, which is the date I have on the map. McKees dam he says existed in 1836, which is same as Cass Street Dam. On page 1030 Thomas A. Mills remembers there was a dam on each side of Treat's Island when he was a boy.

The saw mill stopped operating in 1858 or 1859. Dams 5744 remained three or four years afterward. At page 1106,

Isaac W. Richards, states that Malcolm's Mill, and Adams' Dam were in use in 1866. That is simply confirmatory. On page 511, George Alexander states that he remembers Beard's Dam and Treat's Island dam when he was a boy; prior to 1842. On page 1041, James Cornelius, born 1845, saw Beard's dam first when he was 8 or 10 years old. It remained there about ten or fifteen years after. On page 550, Lewis K. Stevens, states that prior to 1848 there was a dam at Jefferson street, which is dam No. 2. The old Malcolm or Adams' or Haven dam, the three names being applied to the same dam by different witnesses, remained there until the Drainage Canal took it out. There was an-

5745 other dam at Lockport. Page 613, Franklin Collins says that Daggett's dam was built in 1837 or 1838, and

the McKee dam above the Jefferson street bridge existed at that time.

5746 The opinion of the Supreme Court in *Canal Trustees v. Haven*, page 554, volume dated 1886, is as follows (reading):

"It is admitted that the Illinois and Michigan Canal was commenced in 1836, and that portions of the canal through said sections were put under contract in 1838, and the guard lock on section nine near the dam across said river, first above said section sixteen, was commenced in 1840 by digging the pit in the spring and a part of the stone laid in the fall. The stone for the same was quarried and dressed during the spring and summer of the same year. The stone for the said dam, on section nine—which would be dam No. 2—(which is a cement and cut-stone dam), was commenced being quarried and cut the same season, and the dam was commenced the following season, in the spring, and finished in the fall of 1841. The contracts for building said dam and locks were made in 1839, that said lock and dam were to be built.

It is agreed that in the spring of 1839, the plaintiffs commenced building a mill on said lot one, in block fifty-seven, on section sixteen, and also a dam across the Desplaines river, connecting said lot one in block fifty-seven on the east bank of said river with the division line between lots one and four in block fifty-six, on the west bank of said river, and completed said dam and saw mill so as to use the same in the following October or November."

5747 The dam in section sixteen being Adams' or Malcolms' dam. Page 1051, abstract State case, Jeremiah Collins came to Grundy County in 1834; lived five miles from Illinois and over six to Desplaines. He said:

"Mr. Treat had a mill at Treat's Island; there was water power there. That is the only thing I know the river was used for. I knew Johnny Beard. He built a dam and saw mill about 1836 or 1837. I do not know whether the dam was there after they built the aqueduct or not. That was built in 1848."

Re-direct Examination by Mr. Scott.

The highest salary paid to any assistant engineer in employ of United States government, Army Department, is \$333 a month. One man gets that. He is located in New 5784 York City. Excluding army officers, only 12 men draw salary of \$300 a month, which I get. The earthen portion of dam constructed prior to beginning of state suit was sixteen feet wide on top, up stream, slope 3 horizontal to one vertical; downstream slope, upper portion, 3 horizontal to one vertical; and lower portion, 4 horizontal to one vertical. In the dam as actually planned, called for part earthen construction and part concrete. Earthen dam had concrete core wall through lower portion. Length of earthen dam from where it attached to tow path to point it extended out in river about 175 feet. That end constructed of earth to permit its being more readily removed by United States if it saw fit to put in lock at that point, provided it should have improved river for navigation. There was space allowed for lock at that point which had been approved by War Department.

Objection; motion to strike out as to approval, etc.

Adams' dam is indicated on the Wilson profile at the point where the inclined line representing the rapids is stopped.

That point being connected with vertical line giving its 5750 elevation, the elevation of water surface; and that elevation and the distance horizontally of point from head of Lake Joliet correspond with elevation of water surface at foot of Adams' dam, and with distance of Adams' dam from head of Lake Joliet. The basis for the 8 inches I took as average run-off is data given in Harman's report on rainfall and run-off. He says average for entire Illinois valley about 25 per cent. of total rainfall for year. Harman's data covers percentage for fall and summer months and shows that greater part of eight inches rainfall frequently runs off in two or three months, leaving only few inches run-off for 5751 maybe eight or nine months. Page 180 of Harman's report gives table showing average monthly rainfall on Illinois river basin above Peoria; average monthly run-off at Peoria, Ill.

COUNSEL FOR DEFENDANT. We offer in evidence table appearing on page 180, which table is in words and figures following, to-wit:

5752 "Average Monthly Rainfall on Illinois River Basin above Peoria and Average Monthly Run-off at Peoria, Illinois,

Month	1890.		1891.		1892.	
	Off.	On.	Off.	On.	Off.	On.
January	1.025	3.01	.185	2.23	.260	1.40
February	.712	1.58	.238	2.23	.364	1.53
March	.802	2.78	.739	2.56	.652	2.21
April	1.628	3.09	1.903	3.89	1.722	4.35
May	1.093	4.66	.839	2.17	3.889	9.63
June	1.436	6.61	.496	4.16	3.020	9.18
July	.583	.93	.218	2.80	2.318	3.42
August	.089	2.54	.108	4.08	.481	1.86
September	.109	1.75	.088	.87	.193	1.97
October	.151	4.41	.076	.94	.234	.79
November	.159	1.69	.146	4.22	.185	2.36
December	.185	.74	.298	2.15	.241	1.84
Annual	7.97	33.79	5.33	32.30	13.56	40.54

5753 "Average Monthly Rainfall on Illinois River Basin above Peoria and Average Monthly Run-off at Peoria, Illinois.

Month.	1893		1894		1895	
	Off.	On.	Off.	On.	Off.	On.
January	.186	1.80	.288	2.10	.126	1.43
February	.984	2.26	.344	1.58	.182	.54
March	3.132	2.51	1.141	2.77	.504	1.13
April	2.064	5.41	.664	2.77	.420	1.96
May	2.440	2.78	.706	3.46	.205	2.46
June	1.254	3.12	.293	2.26	.116	1.74
July	.291	1.78	.139	.61	.220	4.04
August	.115	.36	.101	1.23	.153	3.50
September	.107	2.90	.275	7.61	.206	2.28
October	.147	1.51	.153	1.35	.135	.84
November	.148	2.41	.173	1.90	.172	3.76
December	.191	1.96	.210	1.08	.925	5.63
Annual	11.06	28.80	4.49	28.72	3.36	29.81

5754 Average Monthly Rainfall on Illinois River Basin above Peoria and Average Monthly Run-off at Peoria, Illinois.

Month	1896		1897		1898		1899	
	Off.	On.	Off.	On.	Off.	On.	Off.	On.
January	1.306	1.02	1.912	5.59	.322	3.88	.809	1.57
February	.945	1.95	1.674	1.75	1.275	2.44	.526	1.30
March	1.156	1.62	2.900	4.22	2.658	5.46	2.295	2.99
April	.588	3.48	2.119	3.14	2.476	1.84	1.490	1.11
May	.598	5.26	1.053	1.39	1.451	4.76	.596	5.93
June	.636	3.07	.475	4.52	1.339	5.04	.500	2.39
July	.296	5.57	.473	3.18	.357	1.51	.241	4.34
August	.705	2.87	.155	1.99	.225	4.28	.141	2.27
September	.349	7.42	.146	.97	.283	4.07	.153	2.99
October	.590	.54	.128	.42	.315	4.30	.172	2.75
November	.543	2.86	.177	3.86	.800	2.43	.224	1.77
December	.449	.37	.146	1.60	.512	1.48	.290	1.70
Annual	8.16	36.03	11.34	32.63	12.01	41.49	7.44	31.11

5755 COUNSEL FOR DEFENDANT. Is there any further data there?

A. That refers to the second question.

On page 183 of Mr. Harmon's report, he makes the following statements (reading):

"The average run-off is 8.46 inches with an average rainfall of 33.52 which is 25.2 per cent.

All of this data includes the flow from the Illinois and Michigan canal, which is equivalent to .6 of an inch per annum over the entire basin of the Illinois above Peoria. If this be deducted the run-off would amount to 7.86 inches or 23.4 per cent. It will be seen that while the average run-off for the upper Illinois basin does not vary materially from other streams in this latitude, that the variation in run-off from year to year and from month to month is very great. From the lowest to the highest in the table given, the lowest in 1895, 3.36, and the highest in 1892, 13.55, the range in run-off is over 400 per cent. The actual low water flow at Peoria during the last ten years has for days and sometimes weeks been as low as 1,000 to 1,200 cubic feet per second, approximately 600 cubic feet of which, has been furnished

through the Illinois and Michigan canal by the pumps at Bridgeport; this quantity being sewage from the south branch of the Chicago river, and often being more than half and occasionally as much as three-quarters of the entire flow at Peoria. The effect of a flow through the new drainage channel of 5,000 cubic feet per second or more can very easily be imagined from the foregoing data when we understand that the natural flow of the Illinois river at Peoria has apparently been as low as 200 to 300 cubic feet per second."

Then on page 184 Mr. Harman gives a table entitled "Des Plaines River Basin Above Riverside. Rainfall During 'Off' and Actually Falling 'On,'" for the years 1887 to 1898, inclusive, which I presume had better be copied in.

COUNSEL FOR DEFENDANT. We offer that in evidence. Table appearing on page 184 and all of page 185:

"Des Plaines River Basin Above Riverside.
Rainfall Running 'Off' and actually Falling 'On.'"

Year	Off Inches.	On Inches.	Per Cent. of Rain Running Off.	Second Feet Per Square Mile.
1887.....	13.18	29.13	45.2	1.00
1889.....	6.13	34.95	17.6	0.45
1893.....	10.38	29.03	35.8	0.76
1894.....	7.44	27.80	26.8	0.55
1895.....	3.08	30.48	10.1	0.23
1896.....	5.04	33.74	15.0	0.38
1897.....	14.05	30.55	46.0	1.03
1898.....	10.92	37.74	29.0	0.81
Averages	8.777	31.68	27.7	0.65

5757 "It will be observed that the range in run-off is from 3.08 inches with a rainfall of 30.48 inches for the year 1895 to a run-off of 14.05 inches with a rainfall of 30.55 in 1897. From a watershed which is recognized as a comparatively impervious area, this range is accounted for by the fact of very low rainfall in 1893 and 1894, preceding the small run-off in 1895. The high run-off

of 1887, 1893, 1897 and 1898, is due in each case to winter freshets. An examination of the details of the tables of run-off shows 8.12 inches of run-off against an exactly equal amount of rainfall in the first three months, January, February and March, 1887, and 5.47 inches of run-off to 6.21 inches of rainfall in the corresponding months of 1893. In 1897 and 1898 the run-off for the same three months was 11.24 inches and 7.88 inches respectively. In 1895 when the very low run-off of 3.08 inches occurred, the run-off for the first three months of the year was only .92 of an inch. It is also noted that in 1895, with a rainfall of 30.48 inches and a run-off of 3.08 inches and in 1897 with a rainfall of only .07 of an inch more for the whole year, or 30.55 inches, the run-off was 14.05 inches. Again in 1898 with a rainfall of 30.74 inches the run-off was 10.92 inches. During the summer months one of the highest rainfalls recorded was 9.56 inches, in July, 1889, and produced a run-off of only 1.09 inches. Another record of excessive summer rainfall (the record for the year not being complete) was in May and June, 1892; the rainfall in May was 6.77 inches and in June 10.58 inches, the run-off being 4.58 inches and 6.06 inches respectively. The winter, spring and early summer storms are therefore capable of producing heavy freshets, and consequently large run-offs from the Desplaines water shed; but heavy rains do not produce a corresponding run-off if occurring during the summer or fall. From this it is evident that the condition of the surface of the basin, as affected by temperature, being impervious when frozen and covered with snow, is the greatest factor in producing a large run-off. Whenever the rainfall may be slight during the spring and early summer months, there will be a correspondingly small run-off for the year.

The following table shows the run-off from the Des Plaines river at Riverside and the Illinois river at Peoria for the years 1893 to 1898, inclusive:

Comparison of Run Off

Illinois River Basin. Above Peoria.				DesPlaines RiverBasin. Above Riverside.		
Depth in Inches				Second Feet Per Square Mile		
Des Paines	Illinois	Illinois Less Canal		Des Plaines	Illinois	Illinois Less Canal
1893	10.38	11.06	10.46	0.76	.815	.769
1894	7.44	4.49	3.89	0.55	.331	.285
1895	3.08	3.36	2.76	0.23	.247	.201
1896	5.04	8.16	7.56	0.38	.600	.554
1897	14.05	11.26	10.66	1.03	.826	.780
1898	10.92	12.01	11.41	0.81	.884	.838
Averages	8.48	8.39	7.79	0.63	.617	.571

The average run-off from the Des Plaines river basin is 8.48 inches and from the Illinois river basin 8.39 inches. There is some variation in the depth of run-off and second feet per square mile, but some general relation exists. In 1897 and 1898 there is, however, quite a divergence which is worthy of note. In 1897 the run-off from the Desplaines basin was 14.05 inches, and from the Illinois basin 11.26 inches. In 1898 the run-off from the Desplaines was 10.92 and from the Illinois 12.01. In order to understand why the run-off from the Desplaines should be more in 1897 and less in 1898 than from the Illinois, we are compelled to compare the rainfall with the run-off by months. In January, 1897, with an average rainfall upon the upper Illinois of 5.59 inches, there was a run-off at Peoria of 1.91 inches. On the contrary, an average rainfall of 5.37 inches on the Desplaines was accompanied by a run-off of 5.26 inches. During the succeeding months of the same year the run-off and rainfall are nearly proportional, so that the excessive run-off for the one month of January places the run-off for the year abnormally high for the Desplaines. The difference in run off for the year 1898 is not so easily discovered.

There was a large run-off from the Illinois at Peoria for each of the months of February, March, April, May and June, the largest being in March, 2.66 inches. On the Desplaines basin over half of the run-off for the entire year was during the same month, being 5.83 inches. These very considerable differences in run-off per month do not make so great a difference in the actual run-off per year, but go to show the wonderful equalizing tendency of the larger area of the Illinois together with its great storage capacity in the wide valley from Utica to Peoria."

5760 The WITNESS (continuing): The discharge of a stream at a certain point cannot be computed accurately by using average slope for considerable distance where, as a matter of fact, slope is not uniform. Counsel for complainant had me compute discharge corresponding to depth shown on 1867 profile. Can compute it more accurately by taking slope at particular point shown on 1883 profile, which is drawn in greater detail. The maximum slope at that point, according to the 1883 profile, is about one foot in four hundred. Taking that as the slope, and a depth of four-tenths, gives velocity of nine-tenths of foot. Taking width at 180 and average depth as three-tenths, as used in computation made for complainant's counsel, area would be 54 second feet, and discharge 48.6 cubic feet per second. Same remarks apply to section on Joliet rapids for which complainant's counsel had me compute discharge. Maximum slope at that point, 5761 according to 1883 profile, is about one foot in 600. Taking that as slope and depth as five-tenths, velocity would be nine-tenths, or trifle less. Practically same as at mouth. Taking width at 350, average depth as three-tenths, the same as in computation for complainant's counsel, area is 105 square feet and discharge 94.5 cubic feet per second. Result got for complainant's counsel was 44.5 cubic feet per second. Based on average slope as shown on Wilson profile. As to formation of ice in drainage canal, conditions are there which have effect on formation of ice in channel which would not be present in stream in natural condition. Great quantity of sewage which comes into Chicago river and Drainage Canal and heated water from condenser plants and other manufacturing plants on Drainage Canal all tend to raise the temperature to considerable extent, which elements would

have effect on formation of ice in Desplaines below
5762 mouth of Drainage Canal because practically all that
water flows into Desplaines. Computations an engineer
can make as to discharge in certain portions of river, for
instance rapids, are not complete enough to enable him to
draw accurate flow line for smaller flow. After devoting con-
siderable time to subject of preparing profile showing flow
line from Joliet to mouth for various small depths at River-
side, concluded that on account of great irregularities in
width, slope, obstructions, boulders and loose rock and vari-
ous elements, would be impossible to draw flow lines for
small quantities which would have value, or which would care
to testify to or to stand for. These irregularities serious
enough in large rivers. Smaller the volume more effect
irregularities have; more indeterminate they become. Find-
ing it impossible to arrive at conclusions on such computa-
tions, took profiles actually determined during government
surveys, specifically the 1867 and the 1883 profiles and instead
of attempting to compute flow lines took those actually de-
termined in field during surveys and worked backwards, as
it were, to determine quantity of water which these actual
profiles corresponded to, which was course I pursued
in preparing for my testimony. In those quantities re-
ferred to heretofore, where result was 21 cubic feet
5764 per second at mouth and 44 cubic feet per second
at rapids at Joliet, question was asked which I consid-
ered more reliable. On spur of moment answered one at
mouth. After careful consideration, think spoke too
hastily and that the upper one is more reliable. Computa-
tions I made, 21 second feet at mouth and 42 second feet
some 12 miles up stream made from Wilson profile and other
assumptions made by counsel for complainant, throws light
on incompleteness of hydraulic elements and therefore, un-
certainty of conclusions, because it is evident to anyone that
discharges would not be twice as great at Joliet as at mouth.
Everyone would agree that river would discharge more water
at mouth than it would at Joliet, with added territory be-
tween two points, yet results come out just opposite way.

As to whether I think it fair to assume that the condition of the Desplaines river at its mouth in 1867 was the same, as it was in 1883, if you refer to depths, would say, no.

Q. I refer to cross section of the river at that point.

A. I take it, you are directing your question toward the computation which I made a few moments ago, and I would say—

Q. Answer the question.

A. I would say in that connection the only thing I used the 1883 profile for was to determine the slope. As a matter of fact the slope was probably greater in 1867 than it was in 1883.

(Motion to strike out the answer as not being responsive to the question. Question reread.)

A. If my answer does not answer it, Mr. Cressy, you will have to be more specific because I have endeavored to answer your question.

Q. I asked you to draw from the profile the depth and to also get from the Wilson report the cross section, which he did. I only asked you to assume that three-quarters of the greatest depth would be the mean depth which is in accord, is it not, with the general practice among engineers 5766 determining the area of a cross section.

A. I do not believe there is any general rule about that.

Q. Is it not a fair assumption?

A. That is probably as near as you can estimate it without knowing. It simply illustrates the point again that we do not know, we have not the data, and if we must guess, why that is probably as good a guess as we could make. I got the width from the map entitled "Woermann Exhibit No. 1."

Q. Did I not ask you if it was the width in 1867 and you answered that it was?

COUNSEL FOR DEFENDANT. Objected to as having no relevancy to the question and answer just given. I do not understand that the width and cross section are the same thing.

COUNSEL FOR GOVERNMENT. Answer the question.

A. Well, to save time, suppose I admit I did say that. 5767

Q. Now read the question which you declined to answer just a moment ago.

Objected to on the ground that the witness did not decline to answer the question.

Question read, as follows:

Q. Do you think it fair to assume, Mr. Woermann, that the condition of the Desplaines river at its mouth in 1867 was the same as it was in 1883?

A. No, sir, it was different in 1883 from what it was in 1867. The slope wasn't the same in 1867 that it was in 1883. I think it was steeper in 1867 and in that respect the estimate which I have made is smaller, in other words it is in your favor, if I might express it that way. As to what I base the statement on that it was steeper in 1867 than it was in 1883, would say that as your volume increases your slopes gradually flatten out until at high water you have a very flat slope. As to whether there would be steeper local slopes but the general slope would not change, would reply that the local slope is what I used and what must be used to get anything worth considering at all. I criticized the profile of 1867 because it did not give the local slope but only gave a general slope and for that reason used the profile of 1883. Being asked if I could use the slope of 1883 and get a more desirable result, why I could not use the cross section of 1883 and get a more reliable result, would say that one would get a more reliable result if they platted a cross section. Supposing the cross section of 1883 platted showed only $\frac{1}{3}$ or $\frac{1}{4}$ of the width that I had assumed the width to be in 1867, as to whether my volume would be proportionately decreased, would say that the width was not assumed, it was scaled from the map which was introduced as Woermann Exhibit 1. It was the narrowest point close to the mouth and I scaled it at the time the map was made and wrote it in in ink. I scaled it from 5769 the government map, the 1883 survey. At the stage of water which corresponded to the profile of 1883.

Q. That would not be the width, would it, for 1867?

A. Not exactly, but I think that the error in width would be very much less in error than the assumption as to depth.

Motion to strike out the answer as not responsive to the question and as being a volunteered argument of witness.

In my survey 1902-1905, in which I had surveying parties out, I corrected up the depths for the Desplaines river

and its mouth. I did not examine that in checking up to ascertain whether there was a width of 180 feet or not at the mouth in 1867. If I had checked that up and assumed the depth that Wilson assumes, I could tell approximately what was the width in 1867.

Q. Suppose you do that, take the cross section at the mouth of the river and find what it would be on a depth of .4 of a foot.

A. I have not the facilities here for platting cross sections at this time.

5770 COUNSEL FOR GOVERNMENT. Here is a cross section which appears at 600 feet below the old dam. That would be in the neighborhood of the mouth of the river, would it not?

A. Yes, sir, a short distance above the mouth.

Q. That would be the nearest point, would it not, from your soundings that we have any cross section of the soundings? You can compare those soundings, to see whether they are correct or not, if you like.

A. If you state that those are the soundings as platted—what soundings are those?

COUNSEL FOR GOVERNMENT. These are your soundings and here is your 1883 line run in there (indicating). And there is your low water line of 1901.

A. Where is the 1883 line?

Q. This pencil line in here as I understand it (indicating). Where it says "1883," and there is 1901 at the top.

A. What is this in red?

Q. This in red is for a depth of .4 of a foot.

A. At this point.

Q. At the deepest point, .4 of a foot.

A. But in a narrow channel like that General Wilson or Mr. Worrall would not run the center line of the proposed improvement away over to one side like that.

5771 Q. You see here is 38, 42, 49, 40, 44, as the soundings under your profile of 1901. Now, assuming a depth of four-tenths of a foot, you estimate that on the greatest depth it would be .49 feet?

A. Just as you pointed out yourself in cross-examination, that proposed center line does not follow the line of greatest depth. Furthermore, during the years that have elapsed from 1867 to the present time, with this large and steady

flow from the drainage canal, it is quite possible, if not probable, that that bottom has been scoured out and may be quite different today from what it was then.

Q. So it would be impossible, would it, to determine what the conditions were in 1867 from any data that we have today?

A. It would be impossible to determine what the exact width was. Your own cross section shows that the banks proper come down very steep and a difference in depth of a foot or two probably would not make ten feet difference in the width.

Q. What does this cross section actually show as to the width on a depth of four-tenths of a foot?

Mr. SCOTT. You are now speaking, when you say "this cross section" of this unidentified paper you have submitted to the witness?

Mr. CRESSY. Yes; I will state that it is a cross section 5772 which was prepared for me by Mr. Parry, a witness in this case, and for many years in the employ of the Sanitary District, as appeared from his testimony.

Mr. SCOTT. Yes, it fully appears in his testimony.

A. Your question was what?

Mr. CRESSY. On Mr. Parry's cross section, what width is there shown to be on a depth of four-tenths of a foot?

Mr. SCOTT. Objected to as incompetent, immaterial and irrelevant.

A. On this cross section, if you take this cross section as it existed in 1900, and put six inches of water in it, the width is a little less than 100 feet.

Mr. CRESSY. Four-tenths of a foot, you should say?

A. Four-tenths, yes.

Q. Instead of six inches. Would you say, Mr. Woerman, that these depths which Mr. Wilson gives, for example, the depth of four-tenths of a foot at the mouth of the river, was or was not the maximum depth in the stream?

A. That particular depth of four-tenths?

Q. Yes, sir.

A. I am unable to say. It may have been and it may not have been.

Mr. CRESSY. I guess that is all.

Whereupon it was agreed between counsel that counsel for the government should have the right to introduce extracts

from Rafter, Kuichling and Vermule, gentlemen who have been identified in the discussion of the Chittenden papers. Such extracts to be furnished counsel for the defendant.

Whereupon adjournment was taken subject to notice.

